

BATTERY PARK CITY AUTHORITY

REQUEST FOR PROPOSALS

FOR

Phase 4 Pile Remediation - North Cove Marina

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I. SUMMARY

Battery Park City Authority d/b/a Hugh L. Carey Battery Park City Authority (“BPCA”) requests proposals (each individual, a “Proposal” or collectively, the “Proposals”) from contractors (each individually, a “Proposer” or collectively, the “Proposers”) to provide construction services for the Phase 4 Pile Remediation - North Cove Marina project (the “Project”). The selected Proposer shall provide all construction services necessary to remediate approximately 193 existing piles located along the south side of the North Cove Marina under a portion of the Battery Park City Esplanade. A general description of the Project and a detailed Scope of Work are attached as Exhibit A.

Minority-Owned Business Enterprises (“MBE”) and Women-Owned Business Enterprises (“WBE”) are encouraged to submit Proposals.

This request for proposals, the attachments and any additional information submitted herewith, (collectively, the “RFP”) does not obligate BPCA to complete the selection and contract award process. BPCA reserves the right: 1) to accept or reject any and all Proposals; 2) to request additional information from any or all Proposers to assist BPCA in its evaluation process; 3) to amend or withdraw this RFP prior to the announcement of the selected firm; and 4) to award the proposed services, in whole or in part, to one or more firms. In case of an amendment to the RFP, all Proposers will be provided with a copy of any such amendment(s) and will be afforded the opportunity to revise their Proposals in response to the RFP amendment.

II. DESCRIPTION OF BPCA

BPCA is a public benefit corporation created in 1968 under the laws of the State of New York for the purpose of financing, developing, constructing, maintaining, and operating a planned community development of the Battery Park City site as a mixed commercial and residential community.

Under the Battery Park City Authority Act (the “Act”), BPCA has the following powers, among others: to borrow money and to issue negotiable bonds, notes or other obligations and to provide for the rights of the holders thereof; to acquire, lease, hold, mortgage and dispose of real property and personal property or any interest therein for its corporate purposes; to construct, improve, enlarge, operate and maintain Battery Park City; to make bylaws for the management and regulation of its affairs, and, subject to agreements with bondholders, for the regulation of Battery Park City; to make contracts and to execute all necessary or convenient instruments, including leases and subleases; to accept grants, loans and contributions from the United States, or the State of New York or the City of New York (the “City”), or any agency or instrumentality of any of them, or from any other source and to expend the proceeds for any corporate purpose; to fix, establish and collect rates, rentals, fees and other charges; and to do all things necessary or convenient to carry out the powers expressly granted by the Act. BPCA has no taxing power.

Since its inception, BPCA has caused the staged development of Battery Park City, in individual parcels, creating a richly diversified mixed use community providing residential and commercial space, with related amenities such as parks, plazas, recreational areas and a waterfront esplanade. Most individual parcels of land in Battery Park City were developed into residential and commercial buildings by tenants (“Ground Lease Tenants”) under long-term ground leases with BPCA. The Ground Lease Tenants are responsible for the maintenance, insurance and defense and indemnification of BPCA with regard to those leased parcels.

One of BPCA’s key responsibilities under the Act is to operate, maintain and repair the parks and opens spaces in and around Battery Park City’s residential and commercial areas. This function has been delegated by BPCA to the Battery Park City Parks Conservancy Corporation (“BPCPC”) through a written Management Agreement. The BPCPC carries out its mission by maintaining 36 acres of parks, playgrounds and open spaces, including a mile-long waterfront esplanade. The BPCPC also develops programs and manages public events for the Battery Park City community. BPCA owns and has built out a commercial condominium unit in a residential building in Battery Park City, which serves as the BPCPC headquarters.

To obtain a copy of BPCA's most recently completed audited financial statements, please visit BPCA's official website at bpca.ny.gov. The audited financial statements and related reports found on BPCA's website will provide you with an overview of the operations for which BPCA is responsible and the areas of expertise in which the selected Proposer must be proficient. For an overview of BPCPC's operations, please visit its website at www.bpcparks.org.

III. SERVICES REQUIRED

A. If selected, Proposer will be responsible for the services delineated in Exhibit A (the "Scope of Work"), attached hereto.

B. All work to be performed by the selected Proposer shall be performed under the supervision of a Project Manager in charge of this engagement (the "Lead PM") who must ensure that the work completed for BPCA is performed competently and in a timely manner.

IV. KEY DATES, CONTRACT TERM AND MINIMUM QUALIFICATIONS

A. Key Dates

The following is a list of key dates, up to and including the date Proposals are due to be submitted, which is subject to change at BPCA's discretion:

- Request for Proposals issued: Wednesday, May 6, 2015
- Pre-proposal meeting: Wednesday, May 13 at 2:00 PM. Meeting Location: BPCA Offices, 200 Liberty Street, 24th Floor, New York, NY 10281 (attendance is highly recommended).
- If desired, and upon coordinating approval, permissible time-frames, and mandatory waivers with Michael Lamancusa, Proposers may perform an underwater inspection of the Project area on one of the following dates: May 8 - 20, 2015
- Deadline to submit questions to BPCA: Monday, May 18, 2015 by 5:00 p.m. (by email only).
All questions regarding this RFP should be submitted in writing via email to the "Designated Contact": Michael LaMancusa, Battery Park City Authority, at Michael.LaMancusa@bpca.ny.gov.
- Deadline for BPCA's response to substantive questions: Friday, May 22, 2015 (via BPCA Website).
- **DUE DATE FOR RESPONSES TO RFP: May 29, 2015 by 3:00 p.m. (the "Due Date").**
- Selection and notification of successful Proposer: To be determined.
- Contract start date: Approximately June 23, 2015.
- Project Completion Date: October 31, 2015.

B. Anticipated Contract Term

It is anticipated that the term of the contract awarded pursuant to this RFP (the "Contract") will be for a period of six (6) month. BPCA reserves the right to terminate the Contract at any time, with or without cause, upon thirty (30) days written notice. BPCA reserves the right to terminate the Contract at any time, without prior notice, if the employee identified in the Proposal as the Lead Manager for this engagement ceases to be employed by the selected Proposer.

C. Minimum Qualification Requirements

The following are the Minimum Qualification Requirements for this RFP. Proposals that fail to comply with these requirements will be rejected.

- 1) Proposer must be licensed and/or authorized to perform the Services Required in New York City.
- 2) Proposer must have at least three years' experience in performing underwater repairs in New York City.

V. GENERAL REQUIREMENTS

A. Questions regarding MBE/WBE participation, joint ventures and sub-contracting goals

Please see Exhibit B (attached) ("Diversity Exhibit") for contractor requirements and procedures for business participation opportunities for New York State certified MBEs/WBEs and equal employment opportunities for minority group members and women.

For questions relating to MBE/WBE participation, joint ventures and sub-contracting goals ONLY, please contact "MBE/WBE Designated Contact" Mr. Anthony Peterson at 212.417.2337.

B. Restricted Period

Applicants are restricted from making contact with anyone other than the Designated Contact or MBE/WBE Designated Contact specified above during the period from the date of publication of the notice of this RFP in the New York State Contract Reporter through approval of the Contract by BPCA (the "Restricted Period"). Employees of BPCA are required to record certain contacts during the Restricted Period, including, but not limited to, any oral, written or electronic communication with a governmental entity under circumstances where a reasonable person would infer that the communication was intended to influence BPCA's conduct or decision regarding the governmental procurement, and to make a determination of responsibility based, in part, upon any such contact. Failure to abide by this process may result in a finding that the firm is a non-responsive Proposer.

C. Submission of Proposals

Proposals are due no later than 3:00 p.m. on May 29, 2015.

Proposers must submit six (6) paper copies of their Proposals and one (1) electronic CD-Rom copy in a sealed package clearly marked "**Proposal Enclosed – Phase 4 Pile Remediation - North Cove Marina**" to the Designated Contact by messenger, overnight courier or certified mail to the following address:

Michael LaMancusa
Battery Park City Authority
One World Financial Center, 24th Floor
New York, NY 10281

BPCA is not responsible for any internal or external delivery delays which may cause any Proposal to arrive beyond the stated Due Date. To be considered, Proposals must arrive at the time and place specified herein and be time stamped by BPCA's time stamp prior to the Due Date. Please leave ample time for building security, as late Proposals will not be accepted. Proposals submitted by fax or electronic transmission will NOT be accepted. A Proposer may, after submitting a Proposal, amend its Proposal by submitting a second, amended Proposal, clearly labeled "**Amended Proposal Enclosed – Phase 4 Pile Remediation - North Cove Marina**" as long as the amended Proposal is submitted by the Due Date.

Public access to Proposals shall be governed by the relevant provisions of the Freedom of Information Law, Article 6 of the New York State Public Officers Law, and regulations adopted pursuant thereto.

D. Mandatory Forms

Proposers must complete and include with their Proposal all “Mandatory Forms,” which can be found at the following URL address: http://bpca.ny.gov/pdf_n/Mandatory_Forms_Packet.pdf, by the Due Date.

These Mandatory Forms include the following:

1) NYS Standard Vendor Responsibility Questionnaire – Submit with the Cost Proposal (as described below), one (1) original unbound set of a completed NYS Standard Vendor Responsibility Questionnaire with original ink signatures. Do not include the Standard Vendor Responsibility Questionnaire in the bound copies of the Cost Proposal. The NYS Standard Vendor Responsibility Questionnaire must be notarized and signed by the individual(s) authorized to bind the firm contractually. Indicate the title or position that the signer holds within the firm.

2) State Finance Law § 139 Form 1 – one original unbound completed SFL 139 Form 1: Professional’s Certifications Pursuant to SFL § 139-j and § 139-k with original signature. State Finance Law § 139 Forms 1 must be signed by the individual(s) authorized to bind the firm contractually.

3) W-9 form.

4) Statement of Non-Collusion.

5) Diversity Forms.

VI. PROPOSAL FORMAT AND CONTENTS

A. Proposal Format

The Proposal must be printed on either 8½” x 11” or 8½” x 14” paper. The Proposal will be evaluated on the basis of its content, not length. BPCA reserves the right to disqualify Proposals that fail to comply with any of these instructions.

B. Proposal Content

A Proposal in response to this RFP must include the following sections in the order listed:

1) Cover Letter, as follows:

The Proposal must include a signed cover Letter from a person within the firm who is authorized to bind the firm. Cover letters must be signed. **Proposals with unsigned Cover Letters will be rejected.**

The Cover Letter must include a representation by the Proposer that, except as disclosed in the Proposal, no officer or employee of the Proposer is directly or indirectly a party to or in any other manner interested financially or otherwise in this RFP.

2) Corporate Overview.

3) Proposer’s discussion of its understanding of the Services Required (see Section III).

4) Proposer’s Responses to the RFP Questions and RFP Additional Information Request, set forth below.

5) Proposers Cost Proposal, as described below.

6) Proposer’s response to the question regarding the use of New York State businesses set forth in Section X of the RFP.

C. RFP Questions

1. Briefly describe your firm's background, size, and history as it may be relevant to the Services Required, with an emphasis on experience with waterfront work in the rivers around New York City.
2. Describe your firm's experience and expertise relevant to the Project.
3. Has your firm or any of the firm's partners/employees been disciplined or censured by any regulatory body within the last 5 years? If so, please describe the relevant facts.
4. Has your firm filed for bankruptcy or reorganization, or had bankruptcy proceeding initiated against it, within the last 5 years? If so, please describe the relevant facts.
5. Are there any potential conflict of interest issues in your firm representing BPCA?
6. If selected, will your firm assign any person to this Project who was previously an employee of BPCA? If so, please i) identify when (month and year) that person's employment at BPCA terminated, and ii) describe that person's involvement, if any, with matters related to the Project during his/her employment at BPCA?
7. List any professional or personal relationships your firm's employees may have with BPCA's Board and/or staff members of BPCA.
8. Identify the Lead PM who will be the primary contact and lead person in providing services to BPCA, and who will be listed as a "key person(s)" in the Contract.
9. Describe your proposed team's experience (including both direct contract work and work performed under subcontracts) with similar work for other public agencies and authorities, with a particular emphasis on New York State and City agencies and authorities or Federal government agencies or authorities. Include contract dates, the nature of the work performed, the contracting agency, the contract number (if known) and the agency supervisor for each.
10. Submit a discussion of your approach to the work, briefly addressing your conceptual step-by-step approach towards completion of the work and outlining the proposed procedures for executing the work.
11. Itemize the work you intend to perform with your firm's resources and/or workforce as well as the work for which you propose to utilize subcontractors.
12. Provide a list of all subcontractors you propose to utilize to complete the Project.
13. Provide a list of all suppliers you propose to utilize to complete the Project.
14. Submit a **bar chart schedule** for performance of the Project, including sequencing of the work, workforce staffing levels, work shifts, all Project milestones and a successful overall completion date not later than October 31, 2015.
15. Identify any and all exceptions taken to BPCA's standard form of contract attached hereto as **Exhibit C** detailing the reasons for such exceptions. No exceptions to the contract will be considered by BPCA after submission of the Proposals. BPCA maintains the right to reject proposals based on non-conformance with the standard form of contract.
16. Please provide any additional information which would serve to distinguish your firm from other firms and that you believe may be relevant to this RFP and your capability to perform the services requested.

D. RFP Additional Information Request

1) Insurance/Bonding:

- a. Do you impose any limitations on liability through your contracts?
- b. Describe the levels of coverage for any insurance your firm carries. List the insurance carrier(s) or provide an insurance certificate showing your firm's coverage in accordance with the following:
 - Commercial General Liability Insurance limits shall not be less than **\$1,000,000** per each occurrence and **\$2,000,000** in the aggregate,
 - Umbrella Liability limits shall not be less than **\$10,000,000**;
 - Automobile liability (Combined Single Injury, Bodily Injury and Property Damage) limits shall not be less than **\$1,000,000**;

- Workman's Compensation shall not be less than statutory limits;
- Employers Liability shall not be less than **\$1,000,000**;
- Disability Insurance as required by applicable provisions of law; Products/Completed Operations in the value of **\$2,000,000**; and
- Contractor's Pollution Liability limits shall not be less than **\$5,000,000**.

The costs of the insurance shall be included in the Cost Proposal. BPCA, BPCPC and the State of New York shall be listed as Additional Insured on CG 2010 (11/85) or similar form and should be included as such on all subcontracts. Policies should contain no limitations/exclusions for Labor Law claims.

- Provide a letter from your surety stating that you are able to provide a payment and performance bond as required by the standard form of contract (Exhibit C).

2) References:

Please provide at least three (3) client references for whom your firm has performed similar work to that requested in this RFP. For each client, please provide the name, address and telephone number for each client's project manager.

3) Appendices:

- Include resumes for all persons Proposer intends to assign to this Project.
- Provide a copy of each addendum submitted by BPCA with regard to this RFP (if applicable) and a signed acknowledgment of receipt of each addendum.
- Provide a proposed site logistics plan for the Project, including:
 - Staging – in North Cove Marina;
 - Staging – on land;
 - Materials storage;
 - Batching/Pumping – locations and protection;
 - Appropriate noise control, trash removal and site maintenance; and
 - Public Security and Safety – pursuant to Department Of Buildings and other applicable regulations.

4) Financial Statements:

Provide a copy of your firm's most recent Audited Financial Statements (within the last year).

E. Cost Proposal

Three copies of the Cost Proposal must be submitted in a separately sealed envelope, as directed below. **To submit a complete Cost Proposal, Proposer must submit each of the following:**

- 1) Lump sum amount for performance of all services described herein, in the form of cost proposal attached hereto as Exhibit D.
- 2) Labor rates in the form attached hereto as Exhibit E.
- 3) Itemized Schedule of Values in the form attached hereto as Exhibit F.

The Cost Proposal, regardless of whether it's bound, must be submitted in its own separate envelope

within the sealed package containing all other Proposal documents. For the avoidance of doubt, the Cost Proposal must be submitted separately and unbound from the remainder of the Proposal documents.

VII. THE EVALUATION PROCESS

A. Objectives

The primary objective of the evaluation process is to select a Proposer who:

- Demonstrates a thorough understanding of the scope of the engagement and the specific responsibilities which it entails;
- Possesses adequate resources to handle assigned responsibilities and to handle unforeseen circumstances that may arise;
- Assigns highly skilled, experienced, diligent, responsible and professional personnel to perform the required services;
- Maintains high ethical standards and has an unblemished reputation; and
- Has no conflict of interest between its representation of BPCA and that of other clients.

The selection process will begin with the review and evaluation of each of the written Proposals. The purpose of this evaluation process is twofold: (1) to examine the responses for compliance with this RFP and (2) to identify the complying Proposers that have the highest probability of satisfactorily performing the Services Required at a reasonable cost to BPCA. The evaluation process will be conducted in a comprehensive and impartial manner. The evaluation process will be conducted by a committee of BPCA's employees selected by BPCA (the "Committee"). **The Committee will evaluate the Proposals based upon the evaluation criteria for selection set forth below.**

BPCA reserves the right to reject and return unopened to the Proposer any Proposal received after the RFP Due Date. All timely submitted Proposals will be reviewed to determine if they contain all required submittals specified herein. Incomplete Proposals may be rejected.

B. Interviews

BPCA reserves the right to determine whether interviews will be necessary for any or all of the Proposers. The purpose of the interview is to further document a Proposer's ability to provide the Services Required, and to impart to the Committee an understanding of how specific services will be furnished. The proposed Lead PM, as well all other key personnel must be present and participate in the interview. Proposer will be evaluated on the basis of whether the interview substantiates the characteristics and attributes claimed by the Proposer in its written response to this RFP and any other information requested by the Committee prior to the interview.

C. Evaluation Criteria for Selection

Selection will be based upon the following criteria:

- | | | |
|---|---|-----|
| 1 | Expertise & experience with relevant in water work | 40% |
| 2 | Approach to work & schedule | 30% |
| 3 | Project staffing | 20% |
| 4 | Proposed MBE/WBE utilization plan (the "Utilization Plan"): | 10% |

D. Basis for Contract Award

The Contract will be awarded to the highest technically rated Proposer whose Proposal is determined to be responsive and in the best interests of BPCA, subject to a determination that the Cost Proposal is fair, reasonable, and provides the best value gives the requirements of the Project.

VIII. NON-COLLUSION

By submitting a Proposal, Proposers hereby warrant and represent that any ensuing Contract has not been solicited or secured directly or indirectly in a manner contrary to the laws of the State of New York, and that said laws have not been violated and shall not be violated as they relate to the procurement or the performance of the Contract by any conduct, including the paying or giving of any fee, commission, compensation, gift, or gratuity or consideration of any kind, directly or indirectly, to any member of the board of directors, employee, officer or official of BPCA.

IX. IRAN DIVESTMENT ACT

By submitting a Proposal or by assuming the responsibility of any Contract awarded hereunder, Proposers hereby certify that they are not on the "Entities Determined To Be Non-Responsive Bidders/Offerers Pursuant to The New York State Iran Divestment Act of 2012" list ("Prohibited Entities List") posted on the New York State Office of General Services website at: <http://www.ogs.ny.gov/about/regs/docs/ListofEntities.pdf> and further certify that they will not utilize any subconsultant that is identified on the Prohibited Entities List on this Contract. The selected Proposer agrees that should it seek to renew or extend any Contract awarded hereunder, it must provide the same certification at the time the Contract is renewed or extended. The selected Proposer also agrees that any proposed assignee of the Contract will be required to certify that it is not on the Prohibited Entities List before BPCA may approve a request for assignment of the Contract.

During the term of any Contract awarded hereunder, should BPCA receive information that a person (as defined in State Finance Law §165-a) is in violation of the above-referenced certifications, BPCA will review such information and offer the person an opportunity to respond. If the person fails to demonstrate that it has ceased its engagement in the investment activity which is in violation of the New York State Iran Divestment Act of 2012 within 90 days after the determination of such violation, then BPCA shall take such action as may be appropriate and provided for by law, rule, or contract, including, but not limited to, seeking compliance, recovering damages, or declaring the selected Proposer in default of the awarded Contract.

BPCA reserves the right to reject any request for renewal, extension, or assignment for an entity that appears on the Prohibited Entities List prior to the renewal, extension, or assignment of the Contract, and to pursue a responsibility review with the selected Proposer should it appear on the Prohibited Entities List hereafter.

X. ENCOURAGING USE OF NEW YORK STATE BUSINESSES IN CONTRACT PERFORMANCE

New York State businesses have a substantial presence in State contracts and strongly contribute to the economies of the state and the nation. In recognition of their economic activity and leadership in doing business in New York State, Proposers for this Contract for commodities, services or technology are strongly encouraged and expected to consider New York State businesses in the fulfillment of the requirements of the Contract. Such partnering may be as subcontractors, suppliers, protégés or other supporting roles.

Proposers need to be aware that all authorized users of this Contract will be strongly encouraged, to the maximum extent practical and consistent with legal requirements, to use responsible and responsive New York State businesses in purchasing commodities that are of equal quality and functionality and in utilizing services and technology. Furthermore, Proposers are reminded that they must continue to utilize small, minority and women-owned businesses, consistent with current State law.

Utilizing New York State businesses in State contracts will help create more private sector jobs, rebuild New York's

infrastructure, and maximize economic activity to the mutual benefit of the contractor and its New York State business partners. New York State businesses will promote the contractor's optimal performance under the Contract, thereby fully benefiting the public sector programs that are supported by associated procurements.

Public procurements can drive and improve the State's economic engine through promotion of the use of New York businesses by its contractors. The State therefore expects bidders/proposers to provide maximum assistance to New York businesses in their contracts. The potential participation by all kinds of New York businesses will deliver great value to the State and its taxpayers.

Proposers can demonstrate their commitment to the use of New York State businesses by responding to the question below:

Will New York State businesses be used in the performance of this contract? ☐ Yes ☐ No

If yes, identify New York State businesses that will be used and attach identifying information.

EXHIBIT A

I. GENERAL PROJECT DESCRIPTION

Located at Manhattan's southwestern tip, Battery Park City is a 92-acre land tract built in the 1970's by dredging organic river soils and filling in a portion of the Hudson River with hydraulic sand fill. This fill is laterally retained with a combination of a crushed quarry stone dike, granular filter materials, timber sheeting bulkhead and a relieving platform. The relieving platform is generally 70-feet wide, but ranges from 43-feet to 50-feet in the North and South Cove areas as well as the northern area adjacent to Stuyvesant High School. The relieving platform is a concrete deck composed of 7 ½ inch thick pre-cast, pre-stressed concrete planks integrated with 7½ inch thick reinforced cast-in-place concrete, spanning between cast-in-place concrete pile-supported bents located approximately 23 feet on center. The piles are 20-inch pre-cast, pre-stressed concrete squares with a design axial capacity of 110 tons. The Platform's landside edge has a continuous cast-in-place reinforced concrete beam, 3-feet wide by 4 or 4½-feet high, supported by vertical and batter piles. Vertical timber sheeting lines the back (inboard) edge of the platform perimeter.

The relieving platform runs the entire perimeter of Battery Park City and is approximately 7,500 linear feet. Two other relieving platforms span over the PATH Tubes for approximately 600 linear feet and have an overall width of 138 feet at the north end and 147 feet at the south. The tube platform structures extend from the North Cove Marina (the "Marina") to the 1941 bulkhead line at West Street. The combined area is approximately 150,000 square feet, including approximately 56,000 square feet beneath the Winter Garden and the World Financial Center buildings. Each relieving platform is divided into sections, or 'bays,' which span between each pile bent. There are approximately 650 pile bents, containing 4 to 10 piles each. A pre-cast concrete seawall skirt along the western boundary protects the piles, platform and bulkhead.

BPCA has been conducting a multi-year pile remediation project by encapsulating the piles supporting the platforms. The first three phases addressed the piles at the Esplanade by the ferry terminal on the north side of the Marina, the south side of the Winter Garden, and the northern portions of the Esplanade and Winter Garden. This Project will address approximately 193 piles (the "Piles"), all of which are protective encasements, beneath the southern and eastern portions of the Marina.

The Project's remediation work will be performed from floats/barges, which will be provided by the selected Proposer and located in the Marina's southern half. Pumping stations must be located upland in restricted, space-constrained areas, as shown in the Conceptual Staging Plan attached as Exhibit H, as the same may be superseded by the selected Proposer's approved site logistics plan (as provided for in Section II below). Due to the public nature of the work area, the selected Proposer shall devise an approach to the Project which allows for the performance of the work in an expedited fashion, with limited impacts on operations in the Marina's northern half, ensuring completion of all work by October 31, 2015.

II. SCOPE OF WORK

The selected Proposer shall provide all labor, equipment, tools, materials, and construction services necessary to perform pile remediation services for the Project, in accordance with the Drawings and Specification attached at Exhibit G, including, but not limited to, the work items listed below.

PRE-REMEDATION WORK

Before the commencement of any remediation work, the selected Proposer shall:

- Submit a finalized site logistics plan (the "Site Logistics Plan") for approval by the Project's engineer, construction manager, and BPCA, addressing the following:

- Project Staging – In Marina;
- Project Staging – On land;
- Materials storage;
- Batching/Pumping – Locations and Protection;
- Appropriate noise control, trash removal and site maintenance; and
- Public Security and Safety – pursuant to Department of Buildings and any other applicable regulations; and
- Submit Notice of Intent to Commence Work, as required by and as shown in Exhibit I, to New York State Department of Conservation.

PROJECT STAGING

The selected Proposer shall:

- Provide between one (1) to three (3) floating platforms or barges (the “Barges”), as necessary for the Project, each with maximum dimensions of forty feet (40’) wide by eighty feet (80’) long, from which all remediation work for the Project shall be performed;
- Locate the Barges wholly within the southern half of the North Cove Marina and in accordance with the Conceptual Staging Plan, as superseded by the approved Site Logistics Plan, and ensure the Barges are oriented such that the longer dimension of each Barge runs north/south throughout performance of the Project;
- Spud or anchor each Barge in place as no mooring to the Esplanade structure or floating docks in the North Cove Marina will be permitted;
- Provide space on the Barges for the selected Proposer’s dive teams, and a temporary facility for the Project engineer’s dive teams, to operate, change, dive, and store equipment*;
- Accomplish all deliveries relating to and/or comprising the work for the Project from the land, via the Liberty Street gate; and
- Minimize any impacts on the operation of the North Cove Marina throughout performance of the Project.

*Please Note: The Lower Quay area at the southeast corner of the Marina is the preferred location for the divers’ changing area, as shown in the Conceptual Staging Plan.

REMEDIATION WORK

- Excavate two feet (2’), or as deep as possible up to two feet (2’), below the mudline of each Pile;
- Power wash the entire exposed surface of each Pile, including the area of each Pile below the mudline as exposed after excavation;
- Install fiberglass reinforced polymer (“FRP”) jackets and applicable formwork so that all port holes are located on alternating faces of each Pile to maintain a constant tremie;
- Install all FRP jackets pursuant to the product manufacturer’s recommendations;
- Pump epoxy grout and install top seals pursuant to the Drawings and Specifications at Exhibit G;
- Backfill the excavated area around each Pile so as to restore the pre-construction mudline;
- Leave any and all installed FRP jackets in place while removing all temporary forms, materials, lines, etc., used in performing the Project; and
- Remove any and all staging equipment, including but not limited to any fencing, and return the site to its pre-construction condition.

EXHIBIT B

CONTRACTOR REQUIREMENTS AND PROCEDURES FOR BUSINESS PARTICIPATION OPPORTUNITIES FOR NEW YORK STATE CERTIFIED MBEs/WBEs AND EQUAL EMPLOYMENT OPPORTUNITIES FOR MINORITY GROUP MEMBERS AND WOMEN

Pursuant to New York State Executive Law Article 15-A and 5 NYCRR §§140-145, BPCA recognizes its obligation under the law to promote opportunities for maximum feasible participation of certified MBEs/WBEs and the employment of minority group members and women in the performance of BPCA contracts.

In 2006, the State of New York commissioned a disparity study to evaluate whether MBEs/WBEs had a full and fair opportunity to participate in state contracting. The findings of the study were published on April 29, 2010, under the title "The State of Minority and Women-Owned Business Enterprises: Evidence from New York" (the "Disparity Study"). The report found evidence of statistically significant disparities between the level of participation of MBEs/WBEs in state procurement contracting versus the number of MBEs/WBEs that were ready, willing and able to participate in state procurements. As a result of these findings, the Disparity Study made recommendations concerning the implementation and operation of the statewide certified MBEs/WBEs program. The recommendations from the Disparity Study culminated in the enactment and the implementation of New York State Executive Law Article 15-A, which requires, among other things, that BPCA establish goals for maximum feasible participation of New York State Certified MBEs/WBEs and the employment of minority groups members and women in the performance of New York State contracts.

Business Participation Opportunities for MBEs/WBEs

For purposes of this solicitation, BPCA hereby establishes an overall goal of 30% for MBE/WBE participation, **15%** for MBE participation and **15%** for WBE participation (based on the current availability of qualified MBEs and WBEs). A contractor ("Contractor") on the Contract must document good faith efforts to provide meaningful participation by MBEs/WBEs as subcontractors or suppliers in the performance of the Contract and Contractor agrees that BPCA may withhold payment pending receipt of the required MBE/WBE documentation. The directory of New York State Certified MBEs/WBEs can be viewed at: <https://ny.newnycontracts.com/FrontEnd/VendorSearchPublic.asp?TN=ny&XID=7562>. For guidance on how BPCA will determine a Contractor's "good faith efforts," refer to 5 NYCRR §142.8.

In accordance with 5 NYCRR §142.13, Contractor acknowledges that if it is found to have willfully and intentionally failed to comply with the MBE/WBE participation goals set forth in the Contract, such finding constitutes a breach of Contract and BPCA may withhold payment from the Contractor as liquidated damages.

Such liquidated damages shall be calculated as an amount equaling the difference between: (1) all sums identified for payment to MBEs/WBEs had Contractor achieved the contractual MBE/WBE goals; and (2) all sums actually paid to MBEs/WBEs for work performed or materials supplied under the Contract.

By submitting a bid or Proposal, a Proposer agrees to demonstrate its good faith efforts to achieve its goals for the utilization of MBEs/WBEs by submitting evidence thereof through the New York State Contract System (the "NYSCS"), which can be viewed at <https://ny.newnycontracts.com>, provided, however, that a Proposer may arrange to provide such evidence via a non-electronic method by contacting BPCA. Please note that the NYSCS is a one stop solution for all of your MBE/WBE and Article 15-A contract requirements. For additional information on the use of the NYSCS to meet the Proposer's MBE/WBE requirements please see the attached MBE/WBE guidance from the New York State Division of Minority and Women's Business Development, "Your MWBE Utilization and Reporting Responsibilities Under Article 15-A."

- A. Additionally, a Proposer agrees to submit a Utilization Plan with their bid or Proposal as evidence of compliance with the foregoing. Any modifications or changes to the Utilization Plan after the Contract award and during the term of the Contract must be reported on a revised Utilization Plan and submitted to BPCA.

- B. BPCA will review the submitted Utilization Plan and advise the Proposer of BPCA's acceptance or issue a notice of deficiency within 30 days of receipt.
- C. If a notice of deficiency is issued, Proposer agrees that it shall respond to the notice of deficiency within seven (7) business days of receipt by submitting to BPCA, at the address specified in this RFP, or by facsimile at 212-417-2279 a written remedy in response to the notice of deficiency. If the written remedy that is submitted is not timely or is found by BPCA to be inadequate, BPCA shall notify the Proposer and direct the Proposer to submit, within five (5) business days, a request for a partial or total waiver of MBE/WBE participation goals. Failure to file the waiver form in a timely manner may be grounds for disqualification of the bid or Proposal.
- D. BPCA may disqualify a Proposer as being non-responsive under the following circumstances:
 - 1) If a Proposer fails to submit a Utilization Plan;
 - 2) If a Proposer fails to submit a written remedy to a notice of deficiency;
 - 3) If a Proposer fails to submit a request for waiver; or
 - 4) If BPCA determines that the Proposer has failed to document good faith efforts.

Contractors shall attempt to utilize, in good faith, any MBE/WBE identified within its Utilization Plan, during the performance of the Contract. Requests for a partial or total waiver of established goal requirements made subsequent to the Contract award may be made at any time during the term of the Contract to BPCA, but must be made no later than prior to the submission of a request for final payment on the Contract.

Contractors are required to submit a Contractor's MBE/WBE Contractor Compliance & Payment Report to BPCA on a monthly basis over the term of the Contract documenting the progress made toward achievement of the MBE/WBE goals of the Contract.

Equal Employment Opportunity Requirements

By submission of a bid or Proposal in response to this RFP, the Proposer/Contractor agrees with all of the terms and conditions of the attached M/WBE – Equal Employment Opportunity Policy Statement. The Contractor is required to ensure that it shall and any subcontractors awarded a subcontract over \$25,000 for the construction, demolition, replacement, major repair, renovation, planning or design of real property and improvements thereon, except where such work is for the beneficial use of the Contractor, undertake or continue programs to ensure that minority group members and women are afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex, age, disability or marital status. For these purposes, equal opportunity shall apply in the areas of recruitment, employment, job assignment, promotion, upgrading, demotion, transfer, layoff, termination, and rates of pay or other forms of compensation. This requirement does not apply to: (i) work, goods, or services unrelated to the Contract or (ii) employment outside New York State.

The Proposer further agrees to submit a MBE/WBE and Equal Employment Opportunity Policy Statement, Form # 4, to BPCA with their Proposal.

To ensure compliance with Article 15-A, Proposer further agrees, where applicable, to submit with the Proposal, a staffing plan identifying the anticipated work force to be utilized on the Contract and if awarded a Contract, will, upon request, submit to BPCA a workforce utilization report identifying the workforce actually utilized on the Contract, if known, through the NYSCS; provided, however, that a Proposer may arrange to provide such report via a non-electronic method by contacting BPCA.

Further, pursuant to Article 15 of the Executive Law (the “Human Rights Law”), all other New York State and Federal statutory and constitutional non-discrimination provisions, the Contractor and sub-contractors will not discriminate against any employee or applicant for employment because of race, creed (religion), color, sex, national origin, sexual orientation, military status, age, disability, predisposing genetic characteristic, marital status or domestic violence victim status, and shall also follow the requirements of the Human Rights Law with regard to non-discrimination on the basis of prior criminal conviction and prior arrest.

Please Note: Failure to comply with the foregoing requirements may result in a finding of non-responsiveness, non-responsibility and/or a breach of the Contract, leading to the withholding of funds, suspension or termination of the Contract or such other actions or enforcement proceedings as are allowed by the Contract.

For questions on MBE/WBE participation, joint ventures and sub-contracting goals ONLY, please contact Mr. Anthony Peterson at 212.417.2337.



Division of Minority and Women's Business Development

Your MBE/WBE Utilization and Reporting Responsibilities Under Article 15-A

The New York State Contract System ("NYSCS") is your one stop tool compliance with New York State's MBE/WBE Program. It is also the platform New York State uses to monitor state contracts and MBE/WBE participation.

GETTING STARTED

To access the system, please login or create a user name and password at <https://ny.newnycontracts.com/FrontEnd/VendorSearchPublic.asp?TN=ny&XID=7562>. If you are uncertain whether you already have an account set up or still need to register, please send an email to the customer service contact listed on the Contact Us & Support page, or reach out to your contract's project manager. For verification, in the email, include your business name and contact information.

VENDOR RESPONSIBILITIES

As a vendor conducting business with New York State, you have a responsibility to utilize minority- and/or women-owned businesses in the execution of your contracts, per the MBE/WBE percentage goals stated in your solicitation, incentive proposal or contract documents. NYSCS is the tool that New York State uses to monitor MBE/WBE participation in state contracting. Through the NYSCS you will submit utilization plans, request subcontractors, record payments to subcontractors, and communicate with your project manager throughout the life of your awarded contracts.

There are several reference materials available to assist you in this process, but to access them, you need to first be registered within the NYSCS. Once you log onto the website, click on the **Help & Support** >> link on the lower left hand corner of the Menu Bar to find recorded trainings and manuals on all features of the NYSCS. You may also click on the **Help & Tools** icon at the top right of your screen to find videos tailored to primes and subcontractors. There are also opportunities available to join live trainings, read up on the "Knowledge Base" through the Forum link, and submit feedback to help improve future enhancements to the system. Technical assistance is always available through the **Contact Us & Support** link on the NYSCS website (<https://ny.newnycontracts.com/FrontEnd/VendorSearchPublic.asp?TN=ny&XID=7562>).

For more information, contact your project manager.

MINORITY AND WOMEN-OWNED BUSINESS ENTERPRISES – EQUAL EMPLOYMENT OPPORTUNITY POLICY STATEMENT

MBE/WBE AND EEO POLICY STATEMENT

I, _____ (the “Contractor”), agree to adopt the following policies with respect to the project being developed at, or services rendered to, the Battery Park City Authority (“BPCA”).

MBE/WBE

This organization will and will cause its contractors and subcontractors to take good faith actions to achieve the MBE/WBE contract participations goals set by the State for that area in which the State-funded project is located, by taking the following steps:

- (1) Actively and affirmatively soliciting bids for contracts and subcontracts from qualified State certified MBEs or WBEs, including solicitations to MBE/WBE contractor associations.
- (2) Requesting a list of State-certified MBEs/WBEs from BPCA and soliciting bids from these MBEs/WBEs directly.
- (3) Ensuring that plans, specifications, request for proposals and other documents used to secure bids will be made available in sufficient time for review by prospective MBEs/WBEs.
- (4) Where feasible, dividing the work into smaller portions to enhance participations by MBEs/WBEs and encourage the formation of joint venture and other partnerships among MBE/WBE contractors to enhance their participation.
- (5) Documenting and maintaining records of bid solicitation, including those to MBEs/WBEs and the results thereof. The Contractor will also maintain records of actions that its subcontractors have taken toward meeting MBE/WBE contract participation goals.
- (6) Ensuring that progress payments to MBEs/WBEs are made on a timely basis so that undue financial hardship is avoided, and that bonding and other credit requirements are waived or appropriate alternatives are developed to encourage MBE/WBE participation.

EEO

(a) This organization will not discriminate against any employee or applicant for employment because of race, creed, color, national origin, sex, age, disability or marital status, will undertake or continue existing diversity programs to ensure that minority group members are afforded equal employment opportunities without discrimination, and shall make and document its conscientious and active efforts to employ and utilize minority group members and women in its work force on State contracts.

(b) This organization shall state in all solicitation or advertisements for employees that in the performance of the State contract all qualified applicants will be afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex disability or marital status.

(c) At the request of BPCA, this organization shall request that each employment agency, labor union, or authorized representative will not discriminate on the basis of race, creed, color, national origin, sex, age, disability or marital status and that such union or representative will affirmatively cooperate in the implementation of this organization’s obligations herein.

(d) The Contractor shall comply with the provisions of the Human Rights Law, all other State and Federal statutory and constitutional non-discrimination provisions. The Contractor and subcontractors shall not discriminate against any employee or applicant for employment because of race, creed (religion), color, sex, national origin, sexual orientation, military status, age, disability, predisposing genetic characteristic, marital status or domestic violence victim status, and shall also follow the requirements of the Human Rights Law with regard to non-discrimination on the basis of prior criminal conviction and prior arrest.

(e) This organization will include the provisions of sections (a) through (d) of this agreement in every subcontract in such a manner that the requirements of the subdivisions will be binding upon each subcontractor as to work in connection with the State contract.

Agreed to this _____ day of _____, 2015

By _____

Print: _____ Title: _____

_____ is designated as the Contractor's Minority Business Enterprise Liaison responsible for administering the Minority and Women-Owned Business Enterprises - Equal Employment Opportunity (MBE/WBE - EEO) program.

MBE/WBE Contract Goals

30% Minority and Women's Business Enterprise Participation

____% Minority Business Enterprise Participation

____% Women's Business Enterprise Participation

EEO Contract Goals (if applicable)

____% Minority Labor Force Participation

____% Female Labor Force Participation

(Authorized Representative)

Title: _____

Date: _____

EXHIBIT C

BPCA Standard Form of Contract

(attached)

CONSTRUCTION AGREEMENT

between

HUGH L. CAREY BATTERY PARK CITY AUTHORITY

and

[NAME OF COMPANY, INC. CORP, CO.]

Dated as of **[DATE]**

Contract No. **[ENTER CONTRACT NUMBER]**

(PROJECT NAME)

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CONSTRUCTION AGREEMENT

AGREEMENT (the “**Agreement**”) made as of **[DATE]** between BATTERY PARK CITY AUTHORITY, d/b/a HUGH L. CAREY BATTERY PARK CITY AUTHORITY, (“**BPCA**”), a body corporate and politic, constituting a public benefit corporation and having a place of business at 200 Liberty Street, 24th Floor, New York, New York 10281, and **[NAME OF COMPANY]**, incorporated in the state of **[STATE]**, having an office at **[Street Address, City, Zip Code]** (“**Contractor**”).

W I T N E S S E T H:

WHEREAS, BPCA has fee title to certain real property located in the City, County and State of New York, generally consisting of approximately 92 acres of land located on the west side of lower Manhattan, bounded by Pier A to the South, the westerly extension of Reade Street to the North, the United States Bulkhead Line to the East and the United States Pierhead Line to the West (collectively, “**Battery Park City**”); and

WHEREAS, BPCA has caused the staged development of Battery Park City, in individual parcels, creating a richly diversified mixed use community providing residential and commercial space, with related amenities such as parks, plazas, recreational areas and a waterfront esplanade; and

WHEREAS, BPCA intends to hire a contractor to perform **[type of services]**, consisting of the Work, as hereinafter defined, for the **[structure]** upon which work will be performed (the “**Project**”), located in and adjacent to **[location]**, in Battery Park City, in the Borough of Manhattan, County, City and State of New York (the “**Site**”); and

WHEREAS, Contractor has been selected to perform the Work, upon the terms and conditions hereinafter provided; and

NOW, THEREFORE, in consideration of the mutual covenants hereinafter set forth, Contractor and BPCA hereby agree as follows:

ARTICLE 1 - DEFINITIONS

The following terms, wherever used in the Contract Documents, as defined herein, shall have the meanings set forth below or in the Section enumerated below next to each term:

- (a) Agreement - as defined in Section 2.2(a).
- (b) Agreement Termination Date - as defined in Section 3.1(a).
- (c) Architect - **[include Name, Address, etc., as applicable]**.
- (d) Artist - **[include Name, Address, etc., as applicable]**.
- (e) BPCA - as defined in the introductory clause of this Agreement. BPCA hereby designates **[BPCA Person and Title]**, as the representative of BPCA for the purpose of acting on behalf of BPCA whenever action is required to be taken hereunder by BPCA. Such designation may be revoked in writing at any time after notice given by BPCA to Contractor. In addition, such representative of BPCA shall have full power and authority to delegate in writing any or all of her responsibilities hereunder to any one or more persons after notice to Contractor.
- (f) Certificate of Substantial Completion - as defined in Section 8.6.
- (g) Change Order - as defined in Section 9.1(b).
- (h) Construction Manager - **[include Name, Address, etc., as applicable]**.
- (i) Contract Documents - as defined in Section 2.2.

- (j) Contract Price - as defined in Article 4.
- (k) Contract Time - the duration of time during which Construction Manager schedules and coordinates the Work of Contractor pursuant to Section 7.2 hereof.
- (l) Contractor - as defined in the first Recital of this Agreement.
- (m) Drawings - Project drawings comprising part of Exhibit [x].
- (n) Engineer **[include Name, Address, etc., as applicable]**.
- (o) Extra Work - any work in addition to the Work to be performed by Contractor pursuant to the Contract Documents.
- (p) Field Order - as defined in Section 9.3.
- (q) Final Acceptance - as defined in Section 8.7.
- (r) Final Requisition - as defined in Section 5.2.
- (s) Guarantor - as defined in Section 27.3.
- (t) Joint Venture - an entity created pursuant to a written agreement among two or more contractors pursuant to which each shares in the direction and performance of the Work and shares in a stated percentage of profits or losses.
- (u) Key Person/Personnel - as defined in Section 27.25.
- (v) Materialman - supplier of Materials.
- (w) Materials - all products, materials, fixtures, tools, equipment, apparatus, and furnishings intended to form a part of the Work.
- (x) Minority Business Enterprise or Minority Owned Business Enterprise or MBE - as defined in Article 26.
- (y) Minority or Minority Group Member - as defined in Article 26.
- (z) Notice to Proceed - a written directive from BPCA to Contractor signed by a duly authorized BPCA representative directing Contractor to begin performance of the Work set forth in this Agreement on a particular date.
- (aa) Payment Bond - as defined in Section 13.3.
- (bb) Performance Bond - as defined in Section 13.3.
- (cc) Preceding Covered Date - as defined in Section 5.5.
- (dd) Product Data - illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by Contractor to illustrate a Material, product or system for some portion of the Work.
- (ee) Progress Schedule for the Work - as defined in Section 3.1(a).
- (ff) Project - as defined in the third Recital of this Agreement.
- (gg) Purchase Order - as defined in Section 10.1(e).
- (hh) Requisitions - as defined in Section 5.2.
- (ii) Samples - physical examples which illustrate Materials or workmanship and establish standards by which the Work will be judged.

- (jj) Site - as defined in the third Recital of this Agreement.
- (kk) Specifications - the specifications comprising part of Exhibit [x].
- (ll) Subcontract - an agreement between the Contractor and a Subcontractor (as defined in subsection (mm), below) for work on the Site.
- (mm) Subcontractor - a person, firm, partnership or corporation under contract with Contractor.
- (nn) Term - as defined in Section 3.1(i).
- (oo) Trade Payment Breakdown - as defined in Section 5.3.
- (pp) Women's Business Enterprise or Women Owned Business Enterprise or WBE - as defined in Article 26.
- (qq) Work - as defined in Section 2.1.
- (rr) Work Completion Date - as defined in Section 3.1(a).

ARTICLE 2 - SCOPE OF WORK, MATERIALS AND LABOR

2.1 Definition of Work

Contractor shall perform and complete (and shall cause all Subcontractors to perform and complete) for BPCA the work more particularly described in Exhibit A (the "**Work**") annexed hereto and made a part hereof, required by and in conformity with the Contract Documents in connection with the construction of the Project on the Site. All materials to be furnished and labor and work to be performed and completed by Contractor and/or Subcontractors as required in the Contract Documents and in conformity with all requirements applicable with respect thereto are herein collectively referred to as the "Work."

2.2 Contract Documents

The "**Contract Documents**" shall consist of the following:

- (a) This instrument (the "**Agreement**"), which includes, in addition to the text comprising Articles 1 through 27, the following:
 - (1) EXHIBIT A - SCOPE OF WORK (as applicable)
 - (2) EXHIBIT B – DRAWINGS (as applicable)
 - (3) EXHIBIT C – SPECIFICATIONS (as applicable)
 - (4) EXHIBIT D - MONTHLY UTILIZATION COMPLIANCE REPORTS (as applicable)
 - (5) EXHIBIT E - PROMPT PAYMENT POLICY (as applicable)
 - (6) EXHIBIT F - INCIDENT REPORT FORM (as applicable)
- (b) The Payment and Performance Bonds (as defined in Section 13.3).
- (c) Change Orders adopted pursuant to Article 9.

The Contract Documents form the contract between BPCA and Contractor. References in the Contract Documents to "the Contract", "this Contract" or "the Construction Contract" shall be deemed to include all of the Contract Documents. References to "this Agreement" or "the Agreement" shall refer to this instrument (including the Exhibits attached hereto), which is one of the Contract Documents.

2.3 Intent of Contract Documents

(a) The intent of the Contract Documents is to include in the Work all labor and materials, insurance, tools, equipment, permits, licenses, taxes, approvals, transportation, surveys, testing, field engineering and other professional services (other than the services of BPCA's Architect, Construction Manager, Engineers, and attorneys, and the inspection, survey and testing services of BPCA) and any other items required to execute and complete the Work satisfactorily and in accordance with the Contract Documents. Contractor shall perform and complete the Work in accordance with the true intent and meaning of the Contract Documents and shall perform all Work incident thereto or as is usually performed in connection therewith or as is reasonably inferable therefrom, it being the intention that all work usually performed by the trade covered by this Agreement and necessary to produce the intended result be performed by Contractor whether or not specifically covered by the Contract Documents.

(b) The Contract Documents are complementary and what is called for by one shall be as binding as if called for by all.

(c) If any conflicts or ambiguities are found in or between the Drawings and Specifications, or among any of the Contract Documents, they shall be brought to the attention of Construction Manager immediately for resolution. Architect and Construction Manager will interpret the Contract Documents so as to secure in all cases the most substantial and complete performance of the Work as is most consistent with the needs and requirements of the Work. In the event that Architect and Construction Manager disagree as to the interpretation of the Contract Documents, such dispute shall be presented to BPCA, which shall have sole authority to resolve the dispute.

(d) Addenda to parts of the Contract Documents are for the purpose of varying, modifying, rescinding or adding to the affected portion of the Contract Documents. All addenda should be read together with the portions of the Contract Documents to which they pertain. Where an addendum modifies a portion of a paragraph or a Section, the remainder of the paragraph or Section shall remain in force unless otherwise stated in the addendum.

(e) Captions, headings, cover pages, tables of contents and footnote instructions contained in the Contract Documents are inserted only to facilitate reference and for convenience and in no way define, limit or describe the scope, intent or meaning of any provision of the Agreement.

(f) Words and abbreviations which have well-known technical or trade meanings are used in the Contract Documents in accordance with such recognized meanings.

(g) Drawings and Specifications are complementary. Anything shown in the Drawings and not mentioned in the Specifications, or mentioned in the Specifications and not shown in the Drawings, shall have the same effect as if shown or mentioned in both.

(h) A typical or representative detail indicated on the Drawings shall constitute the standard for workmanship and Materials throughout corresponding parts of the Work. Where necessary, and where reasonably inferable from the Drawings or Specifications, Contractor shall adapt such representative detail for application to such corresponding parts of the Work. The details of such adaptation shall be subject to prior approval by Architect. Repetitive features shown in outline on the Drawings shall be in exact accordance with corresponding features completely shown.

(i) The layout of mechanical and electrical systems, equipment, fixtures, piping, ductwork, conduit, specialty items, and accessories indicated on the Drawings is diagrammatic, and all variations in alignment, elevation, and detail required to avoid interferences and satisfy Architectural and structural limitations are not necessarily shown. Actual layout of the Work shall be carried out without affecting the architectural and structural integrity and limitations of the Work and shall be performed in such sequence and manner as to avoid conflicts, provide clear access to all control points, including valves, strainers, control devices, and specialty items of every nature related to such systems and equipment, obtain maximum headroom, and provide adequate clearances as required for operation and maintenance.

2.4 Completion of Drawings and Specifications

Contractor acknowledges that there are items of work which are not drawn or specified with complete detail in the Drawings and Specifications but which are required for the completion of the Work. Any such item, when identified as part of the reasonable development of the Work, shall be drawn or specified by Architect in consultation with Contractor, in a manner consistent with contemplated kind and quality and customary standards. When such drawing or specification is approved by BPCA, the drawing or specification so approved shall thereupon be part of the Contract Documents and the item of work shall be performed by Contractor as part of the Work without further action or order of Construction Manager or BPCA and without any increase in the Contract Price (as hereinafter defined) as if such drawing and/or specification were originally included in the Contract Documents.

2.5 Title to Materials

Title to all Materials shall immediately vest in BPCA upon payment in respect of such Materials, whether or not then incorporated or installed into the Project. The Materials shall then become the sole property of BPCA subject to the right of BPCA, Construction Manager or Architect to reject same for failure to conform to the standards of any or all of the Contract Documents. Title to all Work and Materials shall be in BPCA, free and clear of all liens, claims, security interests or encumbrances. Contractor warrants that no Work or Materials shall be fabricated or delivered to the Site by Contractor or any Subcontractor or Materialman subject to any security interest, lien or similar encumbrance.

2.6 Contractor's Obligations

(a) Contractor shall in a good and workmanlike manner perform all the Work required by this Agreement in accordance with the best practice of Contractor's trade within the time specified herein. Contractor shall supervise and direct the Work using its best skill and attention. Contractor shall be solely responsible for all construction means, methods, techniques, sequences and procedures within the scope of Contractor's Work.

(b) Contractor shall furnish, erect, maintain, and remove such construction plant and such temporary Work as may be required for the performance of the Work. Contractor shall be responsible for the safety, efficiency and adequacy of Contractor's plant, appliances and methods, and for damage that may result from failure or improper construction, maintenance or operation of such plant, appliances and methods. Contractor shall comply with all terms of the Contract Documents, and shall do, carry on and complete the entire Work under the direction of and to the satisfaction of BPCA.

(c) Contractor shall provide all equipment, tools and materials and whatever else may be required for proper performance of the Work unless stated otherwise in the Contract Documents.

(d) Contractor shall deliver all Materials at such times and in such quantities as will insure the speedy and uninterrupted progress of the Work. All Materials shall be delivered to the Site in proper order and quantity and shall be stored at the Site, if storage space is available in Construction Manager's opinion, in such places as Construction Manager shall direct; provided, that no delivery of Materials shall be made to the Site without prior approval by Construction Manager. Contractor has been advised and is aware that the Project is located in a congested metropolitan area, and there may not be sufficient space to store Materials on Site. If storage space is unavailable on Site, Contractor shall make arrangements to store Materials off Site at Contractor's own cost. Contractor shall not be entitled to additional compensation for moving Materials from one storage area to another, whether such storage areas are on or off Site. No Materials shall be removed from the Site without the consent of Construction Manager. Contractor shall handle and take care of all Materials used in performance of the Work whether furnished by Contractor or BPCA, as the same are delivered to the Site or to any applicable offsite storage location and shall be solely responsible for the security and condition of the same. After final completion and acceptance of the Work, or sooner if requested by Construction Manager, Contractor shall remove all surplus Materials and scaffolding furnished by it which have not been incorporated in the Work.

(e) Contractor shall follow and perform the Work in accordance with the Contract Documents as interpreted by Architect, Construction Manager, and BPCA.

(f) Unless otherwise provided in the Contract Documents, Contractor shall secure and pay for all permits and governmental fees, licenses and inspections necessary for the proper execution and completion of the Work. Contractor shall give all notices and comply with all laws, ordinances, rules, regulations and lawful orders of any public authority bearing on the performance of the Work. If Contractor observes that any of the Contract Documents are at variance with any applicable laws in any respect, Contractor shall promptly notify Architect and Construction Manager in writing, and any necessary changes shall be accomplished by appropriate modification. If Contractor performs any Work knowing it to be contrary to such laws, ordinances, rules and regulations, and without such notice to Architect and Construction Manager, Contractor shall assume full responsibility therefor and shall bear all costs attributable thereto.

(g) Contractor shall be responsible for collecting all paper, cartons and other debris caused by its Work or personnel, placing the same in a location designated by Construction Manager and keeping the portion of the Site upon which Contractor is performing the Work free from all debris.

(h) Contractor shall attend meetings as directed by BPCA or Construction Manager.

2.7 “Or Equal” Clause

(a) The Materials of manufacturers referred to in the Specifications and on the Drawings are intended to establish the standard of quality and design required by Architect; however, Materials of manufacturers, other than those specified, may be used if equivalent and approved by Architect, Construction Manager and BPCA.

(b) It is deemed that the term “or approved equal” is included after all Materials referred to in the Specifications or on the Drawings.

(c) Architect will initially judge the equivalency of proposed substitute Materials. Architect will make written recommendation of acceptance or rejection to Construction Manager and/or BPCA. Construction Manager and/or BPCA will then authorize Architect to issue to Contractor written approval or rejection of the substitution.

(d) If Contractor desires to use a substitute item, Contractor shall make application to Architect in writing in sufficient time (with regard to the progress of the Work, the period of delivery of the goods concerned and adequate time for Architect’s review) stating and fully identifying the proposed substitute, cost changes (if any), and submitting substantiating data, samples, brochures of the item proposed. It is Contractor’s responsibility to provide at its sole expense sufficient evidence by tests or other means to support any request for approval of substitutions.

(e) Prior to proposing any substitute item, Contractor shall satisfy itself that the item Contractor proposes is, in fact, equal to that specified and had been used satisfactorily in similar applications to the application proposed for the Work, for at least three years, that it will fit into the space allocated and within the load allocated for the same, that it affords comparable ease of operations, maintenance and service, that its appearance, longevity and suitability for the climate and use are comparable to that specified, and that the substitution requires no change in dimension or design of any other Work of Contractor, of any other contractor or in the time required for the performance thereof.

(f) The burden of proof that a proposed substitution is equal to a specified item shall be upon Contractor, who shall support its request with sufficient test data and other means to permit Architect to make a fair and equitable decision on the merits of the proposal. Any item by the manufacturer other than those cited in the Contract Documents, or of brand name or model number or of generic species other than those cited in the Contract Documents, will be considered a substitution.

(g) Acceptance of substitutions shall not relieve Contractor from responsibility for compliance with all the requirements of the Contract Documents. If, notwithstanding the provisions of subsection (e) above, changes in other parts of the Work or the work of other contractors are required by its substitutions, Contractor shall be responsible for the costs of any

such changes including the cost of all design and redesign services related thereto incurred by the Architect and its consultants.

(h) The Contract Time shall not be extended by any circumstances resulting from a proposed substitution, nor shall Contractor be entitled to any compensation for any delay caused thereby or related thereto.

2.8 Quality and Labeling

All Materials furnished shall be new and the quality thereof shall be in accordance with the Contract Documents. When Materials are specified to conform to a given standard, the Materials delivered to the Site shall bear manufacturer's labels stating that the Materials meet such standard. The above requirements shall not restrict or affect BPCA's right to test Materials as provided in this Agreement.

ARTICLE 3 - COMMENCEMENT AND COMPLETION OF THE WORK

3.1 Commencement, Completion and Progress Schedule

(a) Contractor shall prepare and submit a progress schedule for the Work ("**Progress Schedule for the Work**") and agrees to be bound by and comply with the Work Completion Date and the Progress Schedule for the Project (as the Progress Schedule for the Project shall be updated pursuant to subsection (b)) and waives any right to charge or claim damages or any increased cost, charges or expenses against BPCA, Construction Manager, or Architect, for delays or disruptions from any cause whatsoever. Contractor's sole remedy as against BPCA, Construction Manager, or Architect for any delays or disruptions shall be as provided in Section 3.4 hereof. Notwithstanding the foregoing, the Work shall be completed by no later than [date] (the "**Work Completion Date**") with time being of the essence in respect of said Work Completion Date, as more fully set forth in subsection (h) below; this Agreement shall terminate by [date] (the "**Agreement Termination Date**") (the period between the date of commencement of the Work and the Agreement Termination Date, the "**Term**").

(b) The Progress Schedule for the Work shall be formatted in a detailed precedence-style critical path method, or such other format satisfactory to BPCA and Construction Manager and shall also (a) provide a graphic representation of all activities and events including float values that will affect the critical path of the Work, (b) incorporate and coordinate all pertinent information involving each phase of Work, and (c) identify dates that are critical to ensuring the timely and orderly completion of the work in accordance with the requirements of the Contract Documents, including the dates for Substantial Completion of each respective phase of the Work. The Progress Schedule for the Work shall be updated weekly, or at any other time at the request of Construction Manager or BPCA, and submitted to Construction Manager and BPCA for review and approval. Failure to submit any requested update shall constitute a material breach of this Agreement. The Contractor shall promptly give written notice of any actual or potential delays to BPCA and Construction Manager. After submission of the Progress Schedule for the Work, Construction Manager shall coordinate the Progress Schedule for the Work with the Progress Schedule for the Project. The Progress Schedule for the Work may be revised by Construction Manager from time to time.

(c) Contractor shall commence the Work upon receipt of a written notice to proceed signed by BPCA (the "**Notice to Proceed**"), and shall prosecute the Work diligently and in accordance with the time and place requirements of the Project as determined and directed by Construction Manager, by using such means and methods of construction as will assure that the Work will be performed hereunder in accordance with the Contract Documents and Progress Schedule for the Work, and to the satisfaction of BPCA, Architect, and Construction Manager.

(d) If, in the opinion of Construction Manager, Contractor falls behind the Progress Schedule for the Project then in effect, Contractor shall take whatever steps may be necessary to improve its progress and shall, if requested by Construction Manager, submit operational plans to demonstrate the manner in which the lost time may be regained. It is the responsibility of Contractor to maintain its schedule so as not to delay the progress of the Project or the schedules of other contractors. If Contractor delays the progress of its Work or the work of other contractors, it shall be the responsibility of Contractor to increase the number of workers, the number of shifts,

the days of Work and/or, to the extent permitted by law, to institute or increase overtime operations, all without additional cost to BPCA, in order to regain any time lost and maintain the Progress Schedule for the Project then in effect as established by Construction Manager.

(e) If Contractor shall fail to complete the Work by the Work Completion Date, or within the time to which such completion may have been extended, BPCA may, at its option, withhold from any sums otherwise due and owing to Contractor hereunder, so much of the balance thereof as BPCA shall deem necessary to secure it against any costs, expenses, or damages which may be incurred by BPCA as a result of said failure, but any such withholding shall not be deemed to be a waiver of any rights hereunder, and Contractor shall be liable to and shall indemnify and hold BPCA harmless from any and all cost, expense or damage incurred by BPCA by reason of such failure.

[(f) If Contractor shall neglect, fail or refuse to complete the Work on or before the Work Completion Date or any changes thereto in accordance with, or upon the expiration of, any proper extension granted by BPCA, Contractor agrees to pay to BPCA (\$\$\$\$\$), not as a penalty, **but as liquidated** damages for loss of beneficial use of the Project, for each and every calendar day that the Contractor is in default. Default shall include abandonment of the Work by Contractor.] **[delete if no liquidated damages]**

(g) [Said amount of liquidated damages is agreed upon by and between Contractor and BPCA because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages which BPCA would sustain for loss of beneficial use of the Project in the event of delay in completion, and said amount is agreed to be the amount of damages sustained by BPCA and said amount may be retained from time to time by BPCA. The foregoing liquidated damages are intended to compensate BPCA only for the loss of beneficial use of the Project. In addition,] **[delete if no liquidated damages]** Contractor shall be liable to BPCA, to the fullest extent permitted by law, for whatever actual damages (other than actual loss of beneficial use) BPCA may incur as a result of any actions or inactions of Contractor or its Subcontractors including, without limitation, interest expense and carrying costs, liabilities to other Contractors working on the Project or other third parties, job extension costs, and other losses incurred by BPCA. The provisions of this paragraph are exclusive to BPCA, and shall not accrue to other contractors or third parties.

(h) It is further agreed that time is of the essence for each and every portion of the Work. In any instance in which additional time is allowed for the completion of any Work, the new time of completion established by said extension shall be of the essence. Contractor shall not be charged with [liquidated damages or] **[delete if no liquidated damages]** any excess cost if BPCA determines that Contractor is without fault and that the delay in completion of the Work is due to:

(1) any preference, priority or allocation order duly issued by the Government of the United States or the State of New York;

(2) an un contemplated cause beyond the control and without the fault of, or negligence of Contractor, and approved by BPCA, including, but not limited to, acts of God or of public enemy, fires, epidemics, quarantine, strikes, freight embargoes and unusually severe weather; and

(3) any delays of Subcontractors or Materialmen occasioned by any of the causes specified in subsections 1 and 2 of this paragraph.

(i) Notwithstanding the foregoing, and whether or not, at any given time, a Progress Schedule, or update thereto (as appropriate) has been submitted, the Work shall be completed by the Work Completion Date.

(j) Notwithstanding anything to the contrary, a schedule submitted by Contractor showing a time of completion earlier than that specified in the Contract shall not entitle Contractor to any additional compensation in the event the earlier time of completion is not realized.

3.2 Coordination with Other Contractors

Contractor shall coordinate the Work to be performed hereunder with the work of other contractors performing work for the Project in such manner as Construction Manager shall direct. Contractor shall indemnify and hold BPCA, Construction Manager, and Architect harmless from any and all claims or judgments for damages, costs and expenses to which BPCA, Construction Manager or Architect may be subjected or which they may suffer or incur by reason of Contractor's failure to promptly comply with Construction Manager's directions. If Contractor notifies Construction Manager in writing that another contractor is failing to coordinate its work with the Work to be performed hereunder, Construction Manager shall promptly investigate the charge. If Construction Manager finds that charge to be true, it shall promptly issue such direction to the other contractor with respect thereto as the situation may require. BPCA, Construction Manager and Architect shall not, however, be liable for any damages suffered by Contractor by reason of the other contractor's failure to promptly comply with the directions so issued by Construction Manager or by reason of another contractor's default in performance. Should Contractor sustain any damage through any act or omission of any other contractor, Contractor shall have no claim against BPCA, Construction Manager or Architect for such damage but shall have a right to recover such damage from the other contractor, under a provision similar to a provision contained in the following sentence which is part of this Agreement and which has been or will be inserted in the contracts with the other contractors engaged in the Project.

Should any other contractor having or who shall hereafter have a contract with BPCA for the performance of work upon the Project sustain any damage through any act or omission of Contractor hereunder, Contractor shall reimburse such other contractor for all such damages and to indemnify and hold BPCA, Construction Manager and Architect harmless from all such claims. Any claim against a performance bond surety made by any contractor shall be subordinated to any claim of BPCA then existing or that may arise in the future against such other contractor or its performance bond surety.

3.3 Notice of Delay

Should Contractor be or anticipate being delayed or disrupted in performing the Work hereunder for any reason, including, without limitation, its financial condition or Contractor's general nonpayment of its debts as such debts become due, it shall promptly and in no event more than three (3) days after the commencement of any condition that is causing or is threatening to cause such delay or disruption notify Construction Manager in writing of the effect of such condition upon the Progress Schedule for the Project, stating why and in what respects the condition is causing or is threatening to cause delay, provided, however, that notwithstanding the above, if such delay or disruption, or anticipated delay or disruption, should be the result of any change or anticipated change in Contractor's financial condition, Contractor shall notify Construction Manager forthwith of such cause or anticipated cause. Failure to strictly comply with this notice requirement shall be sufficient cause to deny Contractor a change in schedule and to require it to conform to the Progress Schedule for the Project then in effect established by Construction Manager.

3.4 Extension of Time

(a) An extension of time under the Progress Schedule for the Project then in effect may be granted by BPCA subject to the provisions hereof upon written application therefor by Contractor. An application for an extension of time under the Progress Schedule for the Project then in effect must set forth in detail the nature of each cause of delay in the performance of the Work, the date or dates upon which each cause of delay began and ended and the number of days delay attributable to each such cause. After the application is submitted, Contractor shall supply any other data that Construction Manager may request.

(b) Contractor shall be entitled to an extension of time under the Progress Schedule for the Project then in effect for delays in the performance of the Work, if caused:

- (1) solely by unanticipated acts or omissions of BPCA, Construction Manager or Architect; or
- (2) by the unanticipated acts or omissions of other contractors or unanticipated causes beyond the control and without the fault or negligence of Contractor including, but not limited to, acts of God, acts of

public enemy, acts of any Government body, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, unusually severe weather, or delays of Subcontractors or Materialmen arising from unforeseeable causes beyond the control and without the fault or negligence of both Contractor and such Subcontractors or Materialmen; provided, that Contractor shall have used its best efforts and diligently sought to have minimized any such period of delay, by taking whatever measures are necessary, including without limitation, if applicable, seeking alternate sources of Materials, other Subcontractors or other facilities in which to perform the required construction operations; and provided, further, that an application is made pursuant to the requirements of the immediately preceding paragraph.

ARTICLE 4 - CONTRACT PRICE

For the performance and completion of the Work, BPCA shall pay Contractor a lump sum amount of (\$\$\$\$\$), (such sum is herein sometimes referred to as the “**Contract Price**”), which amount shall include any monies earned by or paid to Contractor prior to the execution of this Agreement, provided, that if the Contract Price shall be expressly revised by a Change Order in accordance with Article 9 hereof, the Contract Price shall thereafter mean the Contract Price as so revised. Contractor will submit appropriate Time Sheets in the form of Exhibit [x].

ARTICLE 5 - METHOD, SCHEDULE AND TERMS OF PAYMENTS

5.1 Partial Payment

(a) In accordance with Requisitions (as defined in Section 5.2) submitted and approved as provided below for Work performed in accordance with this Agreement, Contractor shall be entitled to partial payment on account of the Contract Price in an amount equal to the value, as determined in accordance with the Trade Payment Breakdown (as defined in Section 5.3), of the portions of the Work completed and acceptable to BPCA and Construction Manager for purposes of such payment, less a retainage equal to ten percent (10%) of the total amount of all prior partial payments. Partial payments shall constitute advances against the Contract Price until final payment is made and accepted. No partial payment made, nor approval of a portion of the Work given for purposes of making a partial payment, shall constitute an acceptance of any Work not in accordance with the Contract Documents.

(b) Upon completion of fifty percent of the Work, Contractor may make written application to BPCA requesting reduction of the retainage set forth in Section 5.1(a) hereof. Approval of such reduction of retainage and the percentage to which the retainage shall be reduced is in the sole discretion of BPCA. If BPCA approves a reduction of retainage as herein described, BPCA shall so notify Contractor in writing. Any reduction of retainage pursuant to this paragraph (b) shall not be deemed to be a waiver of retainage requirements for future partial payments.

5.2 Requisitions

Applications for partial payments (“**Requisitions**”) and application for final payment (“**Final Requisition**”) shall be in the form previously supplied by BPCA and shall be submitted by Contractor to Construction Manager or its designee in five original copies in the manner hereinafter provided for the approval of BPCA and Construction Manager. Each Requisition shall be supported by such data substantiating Contractor’s right to payment as BPCA and Construction Manager may require.

5.3 Trade Payment Breakdown

Prior to the submission of the first Requisition, Contractor shall present to Construction Manager for approval a trade payment breakdown (the “**Trade Payment Breakdown**”) of the various portions of the Work, aggregating the Contract Price, prepared in such form as specified by BPCA and supported by such data to substantiate its correctness as Construction Manager may require. After approval by BPCA and Construction Manager, the Trade Payment Breakdown shall not be changed or revised in any way without the written consent of Construction Manager. The Trade Payment Breakdown, when approved by Construction

Manager, shall be used only as a basis for Requisitions and shall not be considered as a basis for reducing or increasing the Contract Price.

5.4 Payment for Stored Materials

If approved in advance of delivery by BPCA and Construction Manager, payments will be made on account of 80% of the value of Materials that have not been incorporated in the Work to date, but delivered and suitably stored at the Site or at some other offsite location agreed upon in writing by BPCA and Construction Manager. Such payments shall be conditioned upon submission by Contractor of bills of sale or other supporting documentation satisfactory to BPCA and Construction Manager to establish BPCA's title to such Materials including applicable insurance and transportation to the Site for those Materials stored offsite. In the event that Contractor, with approval of BPCA, stores any Materials offsite, the conditions for payment of Material stored off-site shall include but not be limited to the following: (a) the Material shall be properly stored in a secured location approved by the BPCA and/or Construction Manager; (b) the Material will be covered under the BPCA's builder's risk policy subject to policy limits and restrictions; and (c) the Material may be inspected by the BPCA and /or Construction Manager to assure compliance with Contract Documents.

5.5 Receipts and Releases of Liens

With each Requisition, Contractor shall furnish its affidavit of payment and waiver of lien for Work done and Materials furnished through the date covered by the last preceding partial payment (the "**Preceding Covered Date**") and shall furnish its affidavit certifying that all Subcontractors and Materialmen have been paid for Work performed and Materials furnished through the Preceding Covered Date except for any permitted retainage. BPCA may also require Contractor to attach to each Requisition (i) affidavits of payment and waivers of lien from all Subcontractors and Materialmen dealing directly or indirectly with Contractor for Work performed and Materials furnished through the Preceding Covered Date and/or (ii) the consent of the surety issuing the Payment Bond to such payment. BPCA may require Contractor to execute a waiver of lien at the time payment is made for a Requisition for all Work performed through the date of the Requisition in respect of which payment is being made.

In addition to the documents required to be furnished by the preceding paragraph, with the Final Requisition, Contractor shall furnish (y) its affidavit that there are no liens, claims or demands by, and that there is no indebtedness to, Subcontractors, Materialmen, laborers, other employees or third persons for which BPCA, Construction Manager, or Architect might in any way be responsible and (z) releases from all Subcontractors and Materialmen dealing directly or indirectly with Contractor. Should any such Subcontractor or Materialman fail or refuse to furnish such release, Contractor may be required to furnish a bond satisfactory to BPCA to indemnify it against any such lien, claim or demand. If any such lien, claim or demand remains unsatisfied after all payments are made to Contractor, Contractor shall refund to BPCA all monies that BPCA may be compelled to pay in discharging such lien, claim or demand including all costs, expenses and attorneys' fees which BPCA may incur in connection therewith.

5.6 Time of Payment

Requisitions shall be submitted by Contractor to BPCA and Construction Manager by the seventh day of each calendar month for Work completed up to the last calendar day of the previous month or other day approved by BPCA, and payment shall be made (pursuant to BPCA's Prompt Payment Policy, a copy of which is attached hereto and made part hereof as Exhibit E) on or about twenty days after BPCA receives the Requisition together with the documents required pursuant to Sections 5.2 and 5.5 hereof. Contractor shall be entitled to payment only in the amount approved by BPCA and Construction Manager with respect to such Requisitions, each of which must be signed by BPCA and Construction Manager before payment is made. The value of any Work included in a Requisition for partial payment which is found unacceptable by BPCA or Construction Manager may be deducted from that or any subsequent Requisition.

5.7 Reduction of Retainage

Upon the issuance of a Certificate of Substantial Completion, as defined in Section 8.6, Contractor shall submit a Requisition in an amount equal to the Contract Price less five percent

(5%) of the total contract amount (including all approved Change Orders and pending Change Order proposals), and less the total amount of all prior payments. Upon approval of the same by BPCA, BPCA shall pay to Contractor the amount approved less any amount which BPCA is entitled to withhold hereunder.

5.8 Final Payment

(a) The final balance due Contractor under this Agreement shall be payable to Contractor by BPCA, as final payment hereunder, within thirty days after all of the following have taken place:

- (1) Contractor's Final Requisition has been submitted by Contractor and approved by BPCA and Construction Manager;
- (2) the affidavit provided for in Section 5.5 hereof has been submitted by Contractor, and any other documents or actions expressly specified in the Contract Documents as preconditions to final payment have been submitted or completed; and
- (3) any inspections or approvals with respect to any of the Work that BPCA deems legally required or appropriate by governmental authorities or by the applicable Board of Fire Underwriters have been performed or obtained.

(b) The acceptance of final payment shall constitute a waiver of all claims by Contractor.

5.9 Release and Consent of Surety

Notwithstanding any other provision of this Agreement, before final payment pursuant to Section 5.8 shall become due pursuant hereto or before reduction of retainage, Contractor shall submit to BPCA a consent of surety to final payment or reduction of retainage in form and substance acceptable to BPCA.

5.10 BPCA's Right to Audit and Inspect Records

Contractor shall maintain and shall keep for a period of at least six years after the date of Final Acceptance of the Work, pursuant to Section 8.7, all records and other data relating to the Work. BPCA or its designee shall have the right to inspect and audit all records and other data of Contractor relating to the Work at any time and from time to time until the end of such six year period. Contractor shall promptly respond to any inquiries of BPCA or any representative of BPCA arising out of any such inspection or audit.

5.11 Withholding of Payments

(a) BPCA may withhold payment or, because of subsequently discovered evidence, may nullify the whole or any part of any previously approved Requisition to such extent as may, in the judgment of BPCA, be necessary:

- (1) to assure payment of just claims or liens of any persons supplying labor or Materials for the Work;
- (2) to protect BPCA from loss due to defective Work or to reimburse BPCA, Construction Manager and Architect for fines on account of non-compliance with applicable laws, rules and regulations, including rules promulgated by the Office of Safety & Health Administration;
- (3) to protect BPCA from loss due to death or injury to persons or damage to the Work or property of BPCA, other contractors or others caused by the act or neglect of the Contractor;
- (4) in the event that there is reasonable evidence that the Work will not be completed for the unpaid balance of the Contract Price;

- (5) in the event that there is reasonable evidence that the Work will not be completed within the time provided; or
- (6) in the event that Contractor persistently fails to perform the Work in accordance with the Contract Documents.

In any of such events, BPCA shall have the right to apply any such amounts so withheld in such manner as BPCA may deem proper to satisfy such claims, to secure such protection, to complete the Work or to compensate BPCA for any loss suffered by reason of Contractor's delay. Such application shall be deemed payment for the account of Contractor. In the event that BPCA gives Contractor notice that it intends to make such application, Contractor shall be estopped from disputing liability or the amount of liability unless, within three days after receipt of such notice, it indicates to BPCA in writing that it is not liable or that the amount of its liability is different from that set forth in the notice.

(b) The provisions of this Section 5.11 are solely for the benefit of BPCA, and any action or non-action by BPCA shall not give rise to any liability on the part of BPCA. Failure to so act shall not be deemed a waiver of any present or future claims of BPCA.

ARTICLE 6 – CONTRACTOR

6.1 Superintendence by Contractor, Discipline and Employee Skills

Contractor shall provide a competent construction superintendent to be in charge of the Work. The construction superintendent shall devote full time to the Work, shall be present at the Site during the time the Work is required to be performed and shall have full authority to accept instructions, make decisions and act for Contractor at all times. If at any time the construction superintendent is not satisfactory to BPCA or Construction Manager, Contractor shall, if requested by BPCA, replace such superintendent with another satisfactory to BPCA. Contractor shall enforce strict discipline and good order at all times among Contractor's employees and all Subcontractors. Contractor shall not engage any employee not skilled in the task assigned.

6.2 Representations and Warranties

Contractor represents and warrants that:

- (a) Contractor is financially solvent and is experienced in, and competent to perform the Work and has the staff, manpower, equipment, Subcontractor, and suppliers available to complete the Work within the time specified in this Agreement for the Contract Price;
- (b) Contractor is familiar with all Federal, State or other laws, ordinances, orders, rules and regulations, which may in any way affect the Work;
- (c) any temporary and permanent Work required by this Agreement can be satisfactorily constructed, and such construction will not injure any person or damage any property; and
- (d) Contractor has carefully examined the Contract Documents and the Site and, from Contractor's own investigations, is satisfied as to the nature and location of the Work, the character, quality and quantity of surface and subsurface materials likely to be encountered, the character of equipment and other facilities needed for the performance of the Work, the general and local conditions, and all other conditions or items that may affect the Work. Prior to submitting its bid for performance of the Work, Contractor notified BPCA or Construction Manager in writing of any discrepancies or errors in the Contract Documents.

6.3 Verifying Dimensions and Site Conditions

Before proceeding with the Work, Contractor will check all previous and surrounding work and determine the correctness of the same; failure on its part to detect or report discrepancies will relieve BPCA of liability from any and all claims to recover cost, expense, loss or damage resulting therefrom. Contractor shall take, determine, investigate and verify all field

measurements, dimensions, field construction criteria and Site conditions for the performance of the Work and shall check and coordinate the information contained in the Contract Documents and the boring logs which shall be available for inspection with the requirements of the Work. Contractor shall be responsible for determining the exact location of and to verify the spatial relationships of all Work. If any conflicts or discrepancies are found in the Contract Documents or if Contractor has any questions concerning the foregoing, it shall immediately notify Construction Manager and shall thereafter perform the Work in accordance with the directions of Construction Manager.

6.4 Copies of Contract Documents for Contractor

BPCA shall furnish to Contractor, without charge, two sets of the Contract Documents. Any sets in excess of the number mentioned above may be furnished to Contractor at the cost of reproduction and mailing.

6.5 Meetings

Contractor shall attend all meetings as directed by BPCA or Construction Manager, including meetings set forth in Section 26.3, and shall be represented at such meetings by a person having knowledge of the Work and authorized to act for Contractor at all times. If at any time such person is not satisfactory to BPCA or Construction Manager, Contractor shall, if requested by BPCA, be represented by another person satisfactory to BPCA, having knowledge of the Work and authorized to act for Contractor at all times.

6.6 Related Work

Contractor shall examine the Contract Documents for related work to ascertain the relationship of such work to the Work under the Contract Documents.

6.7 Surveys and Layout

Unless otherwise expressly provided in this Agreement, BPCA shall furnish Contractor survey points necessary for the Work, but Contractor shall lay out the Work.

6.8 Reports and Access

Contractor shall furnish BPCA and Construction Manager with daily and monthly manpower reports on forms provided by BPCA or Construction Manager and such other reports as may be required by BPCA or Construction Manager. BPCA, Construction Manager and Architect shall have full and free access to the shops, plants and factories of Contractor, any Materialmen and Subcontractors to inform themselves as to the progress of the Work.

6.9 Financial Information

During the Term, Contractor agrees to notify BPCA forthwith in writing of any event which has caused or is reasonably anticipated to cause a material adverse change in Contractor's business or financial condition from that shown in the then most recent financial statements furnished by Contractor to BPCA. Contractor has furnished to BPCA financial statements regarding the period from [date] to [date]. Contractor agrees to furnish to BPCA, at BPCA's request from time to time hereafter, quarterly, or annual financial statements (which shall be audited, if such is the practice of Contractor for financial statements covering the applicable period) and such additional information as BPCA shall deem necessary or desirable to satisfy itself of Contractor's continuing ability to complete the Work.

ARTICLE 7 - CONTRACT ADMINISTRATION

7.1 Architect's Responsibilities and Functions

Contractor acknowledges that the role of Architect with respect to the Work shall be as specified in this Agreement. Contractor will comply with the instructions of Architect pursuant hereto.

Architect's duties and services shall in no way supersede or dilute Contractor's obligation to perform and complete the Work in conformity with the Contract Documents.

7.2 Construction Manager's Responsibilities and Functions

(a) Construction Manager shall coordinate and schedule construction to insure that the completion of the Project is on schedule and that the Project is well constructed in accordance with the Contract Documents. Contractor acknowledges that the role of Construction Manager with respect to the Work shall be as specified in this Agreement. Contractor hereby agrees to comply with the directions and instructions of Construction Manager.

(b) Construction Manager shall call for meetings of Contractor, other contractors, Subcontractors and Materialmen as necessary for the proper coordination of the Work. Such meetings shall be held at the Site on regular working days, during regular working hours, unless otherwise directed by BPCA. Attendance shall be mandatory for all parties notified to attend.

7.3 Scope of Responsibility of Architect and Construction Manager

In no event shall any act or omission on the part of the Construction Manager or Architect relieve Contractor of its obligation to perform the Work in full compliance with the Contract Documents. Neither Architect nor Construction Manager will be responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, and neither will be responsible for Contractor's failure to carry out the Work in accordance with the Contract Documents or the failure to fulfill any of the requirements of this Agreement.

ARTICLE 8 - INSPECTION AND ACCEPTANCE

8.1 Access to the Work

BPCA, Construction Manager, Architect or their authorized representatives shall at all times have access to and the right to observe the Work and all facilities where the Work or any part thereof is being fabricated or stored, and Contractor shall provide proper facilities for such access and observation.

8.2 Notice of Required Inspections and Tests

If the Contract Documents, or any laws, rules, ordinances or regulations, require that any Work be inspected or tested, Contractor shall give BPCA, Construction Manager and Architect at least five days prior written notice of readiness of the Work for inspection or testing and the date fixed for such inspection or testing.

8.3 Additional Inspections and Tests

(a) Whenever, in the opinion of BPCA, Construction Manager or Architect, it is desirable to require inspection or testing of the Work or its individual components in addition to any such testing that may be originally included in the Work, they shall have authority to do so whether or not such Work be then fabricated, installed, covered or completed. If such inspection or testing reveals a failure of the Work to comply (1) with the requirements of the Contract Documents, or (2) with respect to the performance of the Work, with laws, ordinances, rules, regulations or orders of any public authority having jurisdiction, Contractor shall bear all costs thereof, including Architect's and Construction Manager's additional services made necessary by such failure; otherwise BPCA shall bear such costs, and an appropriate Change Order shall be issued.

(b) In the event that any item of the Work fails inspection or testing, BPCA, Architect or Construction Manager may require inspection or testing of any or all of the other items of the Work at Contractor's cost and expense.

8.4 Uncovering of Work

(a) If any Work shall be covered or concealed contrary to the request of BPCA,

Architect or Construction Manager, such Work shall, if required by BPCA, Architect or Construction Manager, be uncovered by examination, inspection or testing. Any examination, testing or inspection shall not relieve Contractor of the responsibility to maintain quality control over the Work. If any test results are below specified minimums, BPCA may order additional testing. The cost of such additional examination, inspection or testing, any additional professional services required, and any other expenses incurred by BPCA as a result of such examination, inspection or testing shall be borne by Contractor.

(b) In the event that a typical detail fails inspection or testing, BPCA, Architect or Construction Manager may require inspection or testing of any or all of other such typical details at Contractor's cost and expense.

8.5 Correction of Work

Any Work not approved by BPCA, Architect and Construction Manager shall immediately be reconstructed, made good, replaced or corrected by Contractor including all Work of other contractors destroyed or damaged by such removal or replacement. Rejected material shall be removed immediately from the Site. Acceptance of Materials and workmanship by BPCA shall not relieve Contractor from Contractor's obligation to replace all Work which is not in full compliance with the Contract Documents.

8.6 Certificate of Substantial Completion

Upon their receipt of written notice from Contractor stating that in Contractor's estimation the Work has been substantially performed in conformity with the Contract Documents, Architect and/or Construction Manager shall perform an inspection for the purposes of determining whether the Work has been so performed, commencing such inspection within ten (10) days of receipt of such notice and completing it with all due diligence. When Architect and/or Construction Manager find upon inspection that, to the best of their knowledge and belief, the Work is so performed, they shall prepare and deliver to BPCA for delivery to Contractor a certificate specifying the date of substantial completion of the Work for purposes of this Agreement ("**Certificate of Substantial Completion**") and a punch list of items of Work remaining to be completed.

The delivery of a Certificate of Substantial Completion shall not terminate or alter Contractor's obligation under this Agreement to complete the Work as expeditiously as practicable in conformity with the Contract Documents and to fulfill all terms and conditions of this Agreement.

8.7 Completion of Work and Acceptance

Upon their receipt of written notice from Contractor stating its belief that the Work has been fully performed in conformity with the Contract Documents, and confirming that Contractor has completed any items of Work previously noted to it by Architect and Construction Manager as not having been acceptably completed in any punch list or otherwise, Architect and Construction Manager shall perform an inspection for purposes of determining whether the Work has been so performed. Architect and Construction Manager shall commence such inspection within ten (10) days of receipt of such notice and shall pursue and complete it with all due diligence. When BPCA and Construction Manager find upon inspection that, to the best of their knowledge and belief, the Work has been so performed, they shall prepare a certificate of final completion, and, upon delivery by BPCA to Contractor of said certificate, the Work shall be deemed to be finally accepted by BPCA (such delivery of the certificate of final completion to Contractor is hereinafter referred to as "**Final Acceptance**").

Final Acceptance shall not terminate or alter Contractor's obligation under this Agreement to complete the Work in conformity with the Contract Documents and to fulfill all terms and conditions of this Agreement.

ARTICLE 9 - CHANGES IN THE WORK

9.1 Change Orders

(a) BPCA may, at any time, in any quantity or amount, without notice to the sureties and without invalidating or abandoning this Agreement, order Extra Work. Notwithstanding the terms of subsection 3.1(a) hereof, BPCA may, but shall be under no obligation to, change the manner, sequence or method of performance of the Work or direct acceleration of the Work and Contractor shall, therefor, be entitled to a Change Order (as defined in Section 9.1(b)) provided that such change or acceleration was not ordered to maintain the Progress Schedule for the Project, the Progress Schedule for the Work or to coordinate the Work with the work of other contractors. Contractor shall be obligated to perform changed Work promptly in conformity with any Change Order or Field Order issued in accordance herewith and may not suspend or otherwise refuse to perform the Work contained therein or any other aspect of the Work required under this Agreement because a Change Order has yet to be fully executed.

(b) “**Change Order**” shall mean a written order issued by BPCA to Contractor after execution of this Agreement, authorizing or requiring:

- (i) Extra Work,
- (ii) items that were erroneously deleted or omitted from the Work,
- (iii) items that were included in the Work but were subsequently deleted,
- (iv) an extension or decrease of time to complete Work,
- (v) an increase or reduction in the payment to Contractor, or
- (vi) any other change in the Contract Documents or in the sequence of performing or phasing of the Work.

(c) All Change Orders shall be prepared, signed and issued by Construction Manager at the instruction of BPCA, and to be valid, must be countersigned by BPCA and Contractor.

9.2 Change in Contract Price and Time

(a) The Contract Price will not be revised due to any change of the Work except as and to the extent expressly provided in the Change Orders. The amount by which the Contract Price is to be increased or decreased by any Change Order shall be determined by BPCA and Construction Manager by one or more of the following methods:

- (1) accepting an amount agreed upon by BPCA and Contractor;
- (2) applying the applicable unit prices and alternates where the Work involved is covered by unit prices in this Agreement;
- (3) receiving from Contractor a detailed breakdown satisfactory to BPCA and Construction Manager, including actual time slips and invoices, itemizing the direct cost of labor and Materials to perform the changed Work and adding thereto fifteen percent (15%) to cover profit and all indirect and overhead costs, except that where the changed Work is performed by a Subcontractor or Materialman, the direct cost of labor and Materials to perform the changed Work plus fifteen percent (15%) for profit and all indirect and overhead costs to Subcontractor or Materialman and an additional sum for profit and all indirect and overhead costs of Contractor equal to ten percent (10%) of the first \$100,000, five percent (5%) of the second \$100,000 and three percent (3%) of any cost in excess of \$200,000 to Contractor. No allowance shall be paid on the premium portion of overtime pay. Where the changed Work involves both an increase and a reduction in any contract Work, the above percentage override shall be applied only on the amount, if any, by which the cost of the increase exceeds the cost of the reduction.
- (4) receiving from Contractor a true copy of its bid work sheets to determine

the contract price for the elimination of any contract Work. The amount of reduction shall not include the overhead or profit of Contractor for the eliminated Work. Should Contractor fail to furnish BPCA with such bid work sheets, then Construction Manager shall determine the amount of the reduction. The determination of Construction Manager shall be final and binding unless erroneously or fraudulently arrived at, or arbitrary and capricious;

- (5) adding to the Contract Price only the amount of the premium portion of overtime pay resulting from an acceleration of the Work; or
- (6) adding to the Contract Price, the actual incremental labor and equipment costs incurred by the Contractor resulting from a change in the manner, sequence or method of performing the Work.

(b) The compensation specified in a Change Order shall constitute a release and full payment for the Extra Work covered thereby and for any delay and disruption cost or expense occasioned by reason of said change in the Work.

(c) No time extension shall be granted Contractor by reason of the issuance of any Change Order unless it is expressly stated therein.

9.3 Field Orders

Construction Manager shall have the authority to order minor changes in the Work by the issuance of written field orders (“**Field Orders**”), which may be issued without prior approval by BPCA. Field Orders must be countersigned by Contractor. Minor changes in the Work for purposes of this Section shall mean only changes that do not necessitate or warrant any revision in the Contract Price in excess of \$5,000 or affect the time of performance of Contractor’s Work, any change in the basic character or design of the Project, or deviation from design standards established for the Project. Except as otherwise provided in the preceding sentence relating to an increase in the Contract Price, no claim for an increase in the Contract Price may be based upon any Field Order. If Contractor, on receipt of a Field Order, claims that the change of Work involved necessitates a Change Order, it shall proceed in accordance with the Field Order under protest and notify BPCA immediately of its claim for additional compensation for Extra Work pursuant to Article 14.

9.4 Changed Conditions

(a) BPCA assumes no responsibility for the correctness of any boring or other subsurface information and makes no representation of any kind regarding subsurface conditions and test borings, reports, rock cores, foundation investigation and topographical maps which may be made available to Contractor.

(b) Contractor shall promptly, and before such conditions are disturbed, notify Construction Manager of: (1) subsurface or latent physical conditions differing materially from those indicated in the Contract Documents, or (2) unknown physical conditions of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in this Agreement. Construction Manager shall promptly investigate the conditions, and if it finds that such conditions do materially so differ and cause an increase or decrease in Contractor’s cost of, or the time required for, performance of any part of the Work under this Agreement, Contractor shall be paid in the manner provided for payment with respect to any Change Order and receive, if warranted, a time extension.

(c) No claim of Contractor under this clause shall be allowed unless Contractor has given the notice required in subsection (b) above.

ARTICLE 10 - SUBCONTRACTS AND PURCHASE ORDERS

10.1 Selection of Subcontractors and Materialmen and Approval of Subcontracts and Purchase Orders

(a) Contractor shall submit to Construction Manager, within 21 calendar days of the issuance of the Notice to Proceed, the names of all persons with whom it has contracted or intends to contract or hereafter contracts with respect to the Work.

(b) Except as specifically provided herein, Contractor shall not enter into any Subcontracts or issue any Purchase Orders (as hereinafter defined) to any Materialmen in connection with the performance of Contractor's obligations hereunder without the prior written consent of BPCA to the use of each such Subcontractor or Materialman, and to the agreement to be entered into between Contractor and any such Subcontractor or Materialman. Contractor shall inform BPCA in writing of any interest it may have in a proposed Subcontractor or Materialman. No such consent by BPCA, or employment, contract, or use by Contractor, shall relieve Contractor of any of its obligations hereunder nor may BPCA be held responsible in any way for the performance of a Subcontractor or Materialman to whom BPCA gave its consent.

(c) Contractor shall be responsible for the performance of the Work of any Subcontractors or Materialmen engaged, including the maintenance of schedules, coordination of their Work and resolutions of all differences between or among Contractor and any Subcontractors. It is expressly understood and agreed that any and all Subcontractors or Materialmen engaged by Contractor hereunder shall at all times be deemed engaged by Contractor and not by BPCA.

(d) Upon the request of BPCA, Contractor shall cause any Subcontractor or Materialman employed by the Contractor in connection with this Agreement to execute a copy of the Agreement wherein such Subcontractor or Materialman shall acknowledge that it has read and is fully familiar with the terms and provisions hereof and agrees to be bound thereby as such terms and provisions are or may be applicable to such Subcontractors or Materialmen.

(e) Contractor shall submit to BPCA promptly following execution, three copies of every revision, amendment, modification or cancellation executed or issued by Contractor with respect to any Subcontractor or Materialman. BPCA is not obligated to make payment on account of Work performed or Materials furnished by a Subcontractor or a Materialman under a Subcontract or contract for construction supplies or Materials (hereinafter "**Purchase Order(s)**") unless there shall have been filed with BPCA prior to the submission of a Requisition for each payment, three copies of such Subcontract or Purchase Order containing the provisions required by this Agreement to be contained therein, except as may otherwise be specified by BPCA with respect to Purchase Orders for minor purchases.

10.2 Access by BPCA and Others

Contractor shall include a provision in all Subcontracts and Purchase Orders stating that, to permit verification of Contractor's costs, BPCA shall have the right to have its representatives inspect and audit the books of account and records of the Subcontractor and Materialmen, including the right to make excerpts from such books and records. All payments by Contractor to a Subcontractor or Materialman shall be by check specifically indicating that payment is attributable to this Agreement and identifying the invoice(s) for which payment is being made. Contractor shall include a provision in all Subcontracts and Purchase Orders that will enable representatives of the State of New York, Construction Manager and BPCA, as the case may be, to obtain access during working hours to the appropriate books of account and records of the Subcontractors or Materialmen relating to the Work to determine if there is compliance with the requirements of law or this Agreement.

10.3 Retainage

Contractor may provide for a retainage under any of its Subcontracts or Purchase Orders provided that where a Subcontract or Purchase Order provides for a retainage, the retainage shall be no greater in percentage than that provided for under Sections 5.1 or 5.7 hereof with respect to Contractor itself, unless otherwise approved in writing by BPCA. Contractor shall submit with each Requisition a statement setting forth the amounts of all retainage, if any, under its Subcontracts and Purchase Orders.

10.4 Miscellaneous

(a) Contractor shall be fully responsible for the work, acts and omissions of Subcontractors and Materialmen, and of persons either directly or indirectly employed by Subcontractors and Materialmen.

(b) Contractor's use of Subcontractors and Materialmen shall not diminish Contractor's obligation to complete the Work in accordance with the Contract Documents. Contractor shall control and coordinate the work of Subcontractors and Materialmen.

(c) Nothing contained in this Agreement shall create any contractual relationship between Subcontractors or Materialmen and BPCA, Construction Manager or Architect. Nothing in this Section shall obligate BPCA to pay or to see to the payment of any sums to any Subcontractor or Materialmen.

(d) Contractor shall include a provision in all Subcontracts and Purchase Orders exceeding \$50,000, requiring the Subcontractor or Materialman, if requested by BPCA, until the Subcontractor or Materialman finishes its portion of the Work, to deliver to Contractor unaudited and, if available, audited financial statements of the Subcontractor or Materialman similar to the obligation of Contractor under Section 6.8 and promptly upon receipt thereof Contractor shall deliver copies thereof to BPCA.

ARTICLE 11 - ASSIGNMENT

11.1 No Assignment of Duties

Contractor shall not assign this Agreement or the performance of any obligations of Contractor under this Agreement, nor enter into any Subcontract in respect of the Work or any part thereof except in compliance with Article 10 hereof and with the prior written consent of BPCA, and each and every such assignment, Purchase Order and Subcontract without such compliance and consent shall be void and shall revoke and annul this Agreement.

11.2 No Assignment of Monies

Contractor shall not assign any monies payable hereunder nor execute and deliver any order for payment unless Contractor and the assignee shall have complied with the following terms and conditions:

(a) the assignee shall be a commercial bank or finance company regularly engaged in the business of provided financing to construction contractors and shall be providing such financing to Contractor;

(b) the assignee shall, simultaneously with the assignment, execute and deliver to BPCA an undertaking, in favor of BPCA, in form and substance satisfactory to BPCA, providing that:

(1) assignee will cause Contractor to apply for trust purposes, as defined in New York Lien Law Article 3-A (the "**Lien Law**"), all funds advanced by assignee to Contractor;

(2) assignee will file a copy of the assignment, containing the covenant required by the Lien Law, with the County Clerk of New York County and the head of the agency having charge of the underlying project;

(c) the assignee shall agree with BPCA in writing that BPCA and Contractor may modify any of the terms of this Agreement, including any of the terms of payment, without the consent of assignee;

(d) the assignee shall agree with BPCA in writing that after the effective date of the assignment, BPCA may make payment directly to any Subcontractor or Materialman without any liability to the assignee;

(e) the assignee shall agree with BPCA in writing that the assignee shall require and cause Contractor to keep his books and records in the form and manner described in New York

Consolidated Laws Service Lien Law Article 3-A Section 75; and

(f) the assignee shall agree with BPCA in writing that the assignee will indemnify and hold BPCA harmless from and against any loss, claim or expense incurred as a result of any failure of performance in accordance with the terms of such undertaking.

11.3 Assignment by BPCA

This Agreement or any rights of BPCA under this Agreement, including any guaranties or warranties of workmanship or material, may at any time be assigned by BPCA to the State of New York or any political subdivision, public corporation or agency of the State.

ARTICLE 12 - MECHANICS' LIENS AND CLAIMS

If any mechanic's lien or other claim shall be filed for or on account of the Work, Contractor shall discharge such lien or claim within thirty days of receiving written notice of such lien or other claim.

ARTICLE 13 – INSURANCE AND CONTRACT SECURITY

13.1 Insurance

(a) Contractor shall procure and maintain all of the insurance required under this Article 13 until Final Acceptance of the Work, except with respect to Completed Operations Coverage, as described in 13.1(f)(3) below.

(b) Contractor shall not commence physical performance of the Work at the Site until Contractor has obtained, and required each Subcontractor to obtain, all the insurance required under this Article and until it has furnished to BPCA the certificate or certificates of insurance required by Section 13.1(c) hereof.

(c) Contractor shall furnish to BPCA, before or upon execution of this Agreement, attention: [name], a certificate or certificates of the insurance required under this Article and, upon BPCA's request, certified copies of the original policies of insurance, within the time period required by BPCA and before commencing physical performance of the Work at the Site. Such certificate or certificates shall be in form satisfactory to BPCA, shall list the various coverages and shall contain, in addition to any other provisions required hereby, a provision that the policy shall not be changed, canceled or reduced and that it shall be automatically renewed upon expiration and continued in force until two years after Final Acceptance unless BPCA is given 90 days' written notice to the contrary. Such certificates shall also include riders providing that violation of any of the terms of any policy shall not by itself invalidate such policy. Such policies and certificates should name as additional insureds BPCA, Battery Park City Parks Conservancy Corporation ("BPCPC"), the State of New York, Construction Manager, and Architect.

(d) All insurance required to be procured and maintained must be procured from insurance companies that have a financial rating by A.M. Best Company as published in the most current key rating guide of "A-X" or better and which are authorized to do business in the State of New York.

(e) If at any time any of the required insurance policies should be canceled, terminated or modified so that insurance is not in effect as required, then, if BPCA shall so direct, Contractor shall suspend performance of the Work. If the Work is not suspended then BPCA may, at BPCA's option, obtain insurance affording coverage equal to that required, the cost of such insurance to be payable by Contractor to BPCA.

(f) Contractor and each Subcontractor shall secure in a form satisfactory to BPCA:

- (1) Worker's Compensation and Employer's Liability Insurance (including United States Longshoreman & Harbor Workers and Jones Act Coverages) during the Term for the benefit of such employees as are required to be insured by the applicable provisions of law and voluntary compensation for employees excluded from statutory benefits. Employer's Liability

Insurance and benefits resulting from disease shall not be less than an annual aggregate amount of (\$\$\$\$\$) for each consecutive 12-month period.

- (2) Disability Benefit Insurance during the life of this Agreement for the benefit of such employees as are required to be insured by the applicable provisions of law.

- (3) Commercial General Liability Insurance as follows:

Standard commercial general liability insurance policy with contractual, products and completed operations and explosion, blasting, collapse, excavation and underground damage liability coverages, under the occurrence policy format, issued to and covering the liability of Contractor for all the Work and operations relating thereto and all obligations assumed by Contractor under this Agreement including, but not limited to indemnity obligations in an amount which shall not be less than the following limits:

Combined Single Limits, Bodily Injury
and Property Damage Liability

(\$\$\$\$\$) per each occurrence and (\$\$\$\$\$) in the aggregate.

Product and Completed Operations

(\$\$\$\$\$)

- (i) The completed operations coverage shall continue in force until three years after Final Acceptance of the Work and shall contain, in addition to any other provisions required hereby, a provision that the policy shall not be changed, canceled or reduced. As a condition precedent to the making of Final Payment, Contractor shall furnish BPCA with a certified copy of the completed operations policy.

- (4) Automobile Liability Insurance as follows:

A policy covering the use in connection with the Work of all owned, non-owned and hired vehicles bearing license plates, or under the circumstances that such vehicles are being used they are required by the Motor Vehicle Laws of the State of New York to bear license plates. The coverage under such policy shall not be less than the following limits:

Combined Single Limits,
Bodily Injury and Property Damage Liability

(\$\$\$\$\$) per each occurrence.

- (5) Marine Protection and Indemnity insurance of not less than [amount] per occurrence, if Contractor or any of its Subcontractors utilizes floating equipment, barges or floats, or performs marine-related construction, covering any and all claims for personal injury, death and property damage arising out of or in connection with this Agreement.

- (6) Pollution Liability Insurance, on an occurrence basis, providing coverage for bodily injury liability, property damage or environmental damage caused by pollution conditions with a limit of liability of not less than [amount] per occurrence and in the aggregate. The policy shall include coverage for environmental clean-up on land, in air and on water. The policy shall include coverage for completed operations for two (2) years after the completion of the performance of the Work, gradual and sudden and accidental pollution coverage, with a time element of no less than seven (7) days' notice and thirty (30) days' reporting. The policy shall not contain

a sunset provision, or any other provision, which would prohibit the reporting of a claim and the subsequent defense and indemnity that would normally be provided by the policy. The policy shall provide transportation coverage for the hauling of hazardous materials from the Project Site to the final disposition location.

- (7) Vessel Pollution Liability Insurance, on an occurrence basis, providing coverage for bodily injury liability, property damage or environmental damage caused by pollution conditions, emanating from any floating equipment, barges or floats, utilized by Contractor or Subcontractors in the performance of Marine related construction, with a limit of liability of not less than [amount] per occurrence and in the aggregate. The policy shall include coverage for environmental clean-up on land, in air and on water.
- (8) Contractor shall secure, pay for, and maintain Property Insurance necessary for protection against the loss of owned, borrowed or rented equipment, tools and materials used in Contractor's performance of the Work. The requirement to secure and maintain such insurance is solely for the benefit of Contractor. Contractor's failure to secure such insurance or to maintain adequate levels of coverage shall not render BPCA or any other Additional Insureds, or their agents and employees, responsible for any such losses, and Owner, the other Additional Insureds, and their agents and employees shall have no such liability.
- (9) Valuable Papers Insurance insuring, for the benefit of Contractor and BPCA all plans, designs, drawings, specifications, and documents used under this Agreement by Contractor in a total amount of not less than [\$\$\$\$\$] Contractor may furnish full coverage under one policy, or may submit separate policies from any Subcontractor(s) for their proportionate shares of such coverage.
- (10) Comprehensive Crime/Employee Dishonesty Insurance in a reasonable amount or an amount which is customary in the applicable industry, trade or profession.
- (11) If the Work involves the removal, repair, installation or testing of underground petroleum storage tanks, or petroleum remediation operations, or the performance of work or services related to excavation, loading, transporting or unloading of hazardous or contaminated materials, Contractor shall provide Contractors Professional Liability Insurance with a limit of [\$\$\$\$\$]. Coverage shall provide and encompass the following:
 - (i) Contractor's negligent acts, errors or omissions in rendering or failing to render services of an engineering or consulting nature arising out of their environmental engineering or consulting.
 - (ii) Maximum self-insured retention of [\$\$\$\$\$], or an amount acceptable to BPCA.
- (12) Umbrella Liability Insurance [excess of general liability, automobile liability, Marine protection and indemnity, pollution liability, vessel pollution liability and Employer's Liability] in an amount of not less than [amount].

(g) The insurance required under subsections 13.1(f)3, 4 [and 5] shall be of a type which shall protect Contractor and Subcontractors, respectively, against damage claims which may arise from operations under this Agreement, whether such operations be by the insured or by anyone directly or indirectly employed by the insured. Each of the aforesaid policies shall provide that the insurance company or an attorney approved and retained by the insurance company shall defend any suit or proceeding against BPCA or any officers, agents or employees of BPCA whether or not such suit is groundless, false or fraudulent. Notwithstanding the foregoing, BPCA shall have the right to engage its own attorneys for the purpose of defending any suit or proceeding

against it or its respective officers, agents or employees, and, in such event, Contractor shall, indemnify BPCA for all attorneys' fees and disbursements and other costs incurred by it arising out of, or incurred in connection with, any such defense. The said insurance shall name BPCA, BPCPC, the State of New York, Construction Manager and Architect as additional insureds as respects this location and shall, where applicable, be written on an occurrence basis and shall contain a provision that it is primary and that any similar insurance which BPCA, BPCPC, the State of New York, Construction Manager, Architect, Contractor or Subcontractor elect to carry for their own benefit is secondary or excess and not contributing insurance.

(h) BPCA, at BPCA's cost and expense, may, at its sole option, procure and maintain such insurance as shall in the opinion of BPCA, protect BPCA from contingent liability of BPCA to others for damages arising from bodily injury, including death and property damages which may arise from operations under this Agreement. The procurement and maintenance of such insurance by BPCA shall not in any way be construed or be deemed to relieve Contractor from, or to be a limitation on the nature or extent of, such obligations and risk.

(i) BPCA shall, at all times during the period of construction and until completion and Final Acceptance of the Work procure and maintain at the cost and expense of BPCA "**Builders Risk**" insurance, or its functional equivalent, against direct physical loss or damage to the Work and on all Materials to be made a part of the Work in the names of BPCA, Construction Manager, Contractor and Subcontractors, said amount of insurance to be procured and maintained on a one hundred percentage (100%) completed value basis on the insurable portion of the Work, which insurance shall contain a deductible provision for all losses except flood and earthquake in the amount of TEN THOUSAND DOLLARS (\$10,000) and a deductible provision for flood and earthquake in the amount of TEN THOUSAND DOLLARS (\$10,000). BPCA recognizes that the deductible applicable to flood and earthquake may be greater than TEN THOUSAND DOLLARS (\$10,000) due to insurance market conditions and shall notify Contractor if such deductible is greater than TEN THOUSAND DOLLARS (\$10,000). Losses up to and including the amounts of such deductible provisions shall be borne by Contractor. The insurance specified above may, in certain instances, include other parties as named insureds, as the interests of such parties may appear. Loss, if any, is to be made adjustable with and payable to BPCA on behalf and for the named insureds as the interests of such insureds may appear. BPCA shall, in BPCA's sole discretion, have power to adjust and to settle with the insureds any loss or claim under such insurance. The above is not intended to be a complete, full or accurate description of the coverage provided by the policies of insurance, copies of which are on file with BPCA. This subsection (i) is not intended to create or give any rights to Contractor or Subcontractors other than those which may be made available to such Contractors or Subcontractors under the terms of such policies. BPCA assumes no obligation to obtain insurance other than that evidenced by said policies. Contractor and Subcontractors shall not violate or permit to be violated any term or condition of such policies and shall at all times satisfy the safety requirements of BPCA and of the insurance companies issuing the aforementioned policies. The Contractor shall, upon notification by BPCA, obtain such insurance at BPCA's expense on a date determined by BPCA, which date shall not be less than thirty (30) days after notice to Contractor of such determination by the BPCA.

13.2 Effect of Procurement of Insurance

Neither the procurement nor the maintenance of any type of insurance by BPCA or Contractor shall in any way be construed or be deemed to limit, discharge, waive or release Contractor from any of the obligations and risks impressed upon Contractor by this Agreement or to be a limitation on the nature or extent of such obligations and risks.

13.3 Contract Security

Contractor shall, if it has not already done so, furnish to BPCA, with the execution of this Agreement, to BPCA, a bond in the form acceptable to BPCA in an amount at least equal to one hundred percent (100%) of the Contract Price for performance of the Work (the "**Performance Bond**"), and a labor and material payment bond in the form acceptable to BPCA in an amount at least equal to one hundred percent (100%) of the Contract Price for the payment of all persons performing labor or providing Materials in connection with the Work (the "Payment Bond"). The surety on said bond shall be a surety company authorized to do business in the State of New York and shall be rated at last B+ by A.M. Best and Company, or meet such other requirements as are acceptable to BPCA.

13.4 Additional or Substitute Bond

If at any time BPCA shall be or shall become dissatisfied with any surety or sureties then obligated upon the Performance Bond or the Payment Bond, or if for any other reason such bonds shall cease to be adequate security to BPCA, Contractor shall within five (5) days after notice from BPCA to do so, substitute an acceptable bond or bonds in such form and sum and signed by such other surety or sureties as may be satisfactory to BPCA, except that the penal sum of said bond shall not exceed the Contract Price as adjusted by Change Orders. No further payments shall be deemed due nor shall be made until the new surety or sureties shall have furnished such an acceptable bond or bonds to BPCA.

ARTICLE 14 - CLAIMS FOR EXTRA WORK

(a) If Contractor is of the opinion that (i) any work that it has been ordered to perform is Extra Work and not Work as set forth in the Contract Documents, (ii) any action or omission of BPCA, Construction Manager or Architect is contrary to the terms and provisions of the Contract Documents and will require the performance of Extra Work or will cause additional expense to Contractor or (iii) any determination, order or directive of BPCA, Construction Manager or Architect is contrary to the terms of the Contract Documents and will require the performance of Extra Work or will cause additional expense to Contractor, Contractor shall:

- (1) promptly comply with each determination, order or directive and proceed diligently with the performance of the Work in accordance with BPCA's instructions,
- (2) notify BPCA, Construction Manager and Architect in writing within 72 hours of such determination, order, act or omission that Contractor believes such will require it to perform Extra Work or incur additional expense and the basis for Contractor's conclusion and request a final determination thereon by BPCA; and
- (3) present to the Construction Manager for signature daily time and Material tickets to confirm quantities of Material and hours of labor in cases where Contractor is performing the Work which it considers to be Extra Work.

If BPCA determines that (x) such work is Work required to be performed hereunder and not Extra Work, (y) such action or omission is proper, or (z) such determination, order or directive is proper, Contractor, in order to reserve its right to claim compensation for or damages resulting from the performance of such work or the compliance with such determination, order or directive, must notify BPCA in writing within three (3) working days after receiving notice of BPCA's determination that it is performing such work or complying with such determination, order or directive under protest.

In addition to the foregoing, Contractor must submit to BPCA, Construction Manager and Architect within thirty (30) days after it has performed such work or complied with such determination, order or directive, a detailed statement of the extra expense claimed to have been incurred and of any claimed damages resulting from the performance of such work or the compliance with such determination, order or directive.

(b) No claim for Extra Work shall be allowed unless the same was done pursuant to written order approved in writing by BPCA. Contractor's failure to comply with any provision of this Article:

- (1) shall constitute a conclusive and binding determination on the part of Contractor that such action, omission, determination, order or directive does not involve Extra Work, has not caused extra expense or damages to Contractor, and is not contrary to the terms and provisions of the Contract Documents; and
- (2) shall constitute an irrevocable waiver by Contractor of any claim for compensation for or damages resulting from the performance of such work

or the compliance with such determination, order or directive.

(c) The value of claims for Extra Work, if allowed, shall be determined by the methods described in Section 9.2(a).

ARTICLE 15 - TERMINATION

15.1 Termination for Cause

(a) If any of the following events shall occur (an “**Event of Default**”) then BPCA or Construction Manager may serve written notice upon Contractor and upon Contractor’s surety, if any, terminating this Agreement at a specified date. The notice shall contain the reasons for termination but shall not be effective to terminate this Agreement if Contractor cures all Events of Default stated in the notice prior to the date specified in the notice of termination.

- (1) Contractor shall violate any substantial provision of this Agreement, including, without limitation, by failing to maintain the Progress Schedule for the Project or Progress Schedule for the Work then in effect in accordance with, or failing to discharge any of its responsibilities under, Section 3.1(d) hereof, including abandonment of the Work by Contractor, or by failing to indemnify and hold harmless BPCA (as required by Sections 3.1(e), 3.2, 17.5, 21.1, 21.2, 22(c) or any other provision of this Agreement) from and against any and all claims, liabilities, losses, costs or damages arising out of Contractor’s performance of, or failure to perform, its obligations under this Agreement in accordance with its terms, or if the Contractor fails to maintain the insurance required by the provisions of Section 13; or
- (2) any material adverse change shall take place in the financial condition of the Contractor;
- (3) Contractor takes any action which would result in it becoming the subject of any insolvency proceeding. The term “insolvency proceeding” as used herein shall include the filing of a petition for relief under Title 11 of the United States Code by Contractor or the consent, acquiescence or taking of any action by Contractor, or the filing by or against Contractor of petition or action, looking to or seeking any reorganization, arrangement, composition, readjustment, liquidation, dissolution, or similar relief under any other regulation; or the appointment, with or without the consent of Contractor, of any trustee, custodian, receiver or liquidator of Contractor or of any property or assets of Contractor; or Contractor’s making of an assignment for the benefit of creditors or its inability to pay its debts as they become due;
- (4) Contractor misrepresented or omitted information in its submission of the Statement of Qualifications of Contractor submitted by Contractor to BPCA in connection with this Agreement; or
- (5) any partner, principal, director, officer or shareholder owning in excess of five percent (5%) of the stock of Contractor shall have been convicted of a felony.

(b) Upon the occurrence of an Event of Default, at BPCA’s option exercised by written notice to Contractor, title to any or all of Contractor’s Materials, equipment, work product, work in process and dies and tools, whether on the Site or off site, which are necessary or useful in completing the Work shall vest in BPCA and BPCA may take possession of and utilize the same for completion of the Work; provided that title to such items shall revert to Contractor upon effectuation of a cure of the Event of Default prior to the termination of this Agreement. If no cure has been effected, this Agreement has been terminated and BPCA has taken possession of the same, then after BPCA has taken possession and the Work shall have been completed by or on behalf of BPCA, BPCA shall pay to Contractor, in respect to the items for which title has vested in BPCA, an amount equal to the sum of:

- (1) the direct costs of Contractor for such Materials and Work in progress, and
- (2) the depreciated book value of such tools and dies less, if BPCA elects to return the tools and dies to Contractor, the salvage value thereof. BPCA shall have the right to set off against such payment due to Contractor any amounts then due and payable by Contractor to BPCA which may accrue as damages owing by Contractor to BPCA under the terms of this Agreement. Contractor shall execute any further documents (including Form UCC-1 Financing Statements to give public notice of the potential ownership interest of BPCA as set forth herein) required by BPCA to confirm the terms of this subsection 15.1(b).

(c) Upon termination of this Agreement, BPCA shall have the right, in addition to all other rights and remedies, to complete or have the Work completed by such means and in such manner, by contract or otherwise, with or without public letting as permitted by law, as BPCA deems advisable. BPCA may deduct any loss it incurs thereby from any payment then or thereafter due to Contractor without prejudice to any other remedy BPCA may have.

(d) Immediately upon termination in accordance with the provisions of this Section, each and every Subcontract and Purchase Order entered into by Contractor shall, at BPCA's option, be automatically assigned to BPCA, and Contractor shall insert a provision to this effect in all Subcontracts and Purchase Orders.

(e) Contractor shall, upon the date when such termination shall take effect, promptly notify the union or unions, if any, having jurisdiction over the work by its employees that it releases the Project and consents that the Work be performed by others and Contractor expressly authorizes BPCA to notify the union or unions of such release in the name of Contractor. The failure, neglect or refusal of Contractor to issue such release or the disclaimer by it of the effectiveness of the release issued by BPCA shall subject Contractor to all damages sustained by BPCA.

(f) If this Agreement shall have been terminated by BPCA pursuant to this Section 15.1 and it shall be finally determined by BPCA or a court of competent jurisdiction that adequate grounds for such termination did not exist, then such termination shall be deemed a termination for convenience of BPCA under Section 15.2 hereof and the sole right, remedy and recourse of Contractor against BPCA shall be governed and determined by Section 15.2 hereof.

15.2 Termination for Convenience of BPCA

(a) BPCA, at any time, may terminate this Agreement for its own convenience. Any such termination shall be effected by delivering to Contractor a notice of termination specifying the extent to which performance of Contractor's Work under the Contract is terminated and the date upon which such termination becomes effective. Upon receipt of the notice of termination, Contractor shall:

- (1) stop work under this Agreement on the date specified in the notice of termination;
- (2) place no further Purchase Orders or Subcontracts for Materials, services or facilities;
- (3) unless directed otherwise by BPCA, terminate all Purchase Orders and Subcontracts;
- (4) assign to BPCA, in the manner, at the times, and to the extent directed by Construction Manager, all of the right, title and interest of Contractor under the Purchase Orders and Subcontracts so terminated, in which case BPCA shall have the right, in its sole discretion, to settle or pay any or all claims arising out of the termination of such Purchase Orders and Subcontracts;
- (5) to the extent required by Construction Manager, settle all outstanding liabilities and all claims arising out of such termination of Purchase Orders

and Subcontracts, with the approval or ratification of Construction Manager, which approval or ratification shall be final for all the purposes of this Section 15.2;

- (6) transfer title to BPCA and deliver in the manner, at the time, and to the extent, if any, directed by the Construction Manager (i) the fabricated or unfabricated parts, Work in process, completed Work, supplies, and other Material produced as a part of, or acquired in connection with the performance of, the Work terminated by the notice of termination, and (ii) the completed or partially completed plans, drawings, work product, information and other property, which if this Agreement had been completed, would have been required to be furnished to BPCA; and
- (7) take such action as may be necessary, or as the Construction Manager may direct, for the protection and preservation of the property related to this Agreement which is in the possession of Contractor and in which BPCA has or may acquire an interest.

(b) In the event of a termination of this Agreement pursuant to this Section 15.2, Contractor shall be paid by BPCA only the apportioned Contract Price for Work installed, the fair and reasonable value of Materials stored on the Site and under order for which Contractor is responsible for payment, less any sums properly deductible by BPCA, except that in no event shall Contractor be entitled to compensation in excess of the total Contract Price.

15.3 Suspension of Work

(a) BPCA may at any time and for any reason direct Contractor to suspend, stop, or interrupt the Work or any part thereof for a period of time. Such direction shall be in writing and shall specify the period during which the Work is to be stopped. Upon receipt of a direction of suspension, Contractor shall, as soon as practicable, cease performance of the Work as ordered and take immediate affirmative measures to protect the Work from loss or damage. Contractor shall resume the Work upon the date specified in such direction or upon such other date as BPCA may thereafter specify in writing.

(b) The period during which the Work shall have been suspended, stopped or interrupted may, if warranted, be added to the time fixed for performance. A suspension, stoppage or interruption of the Work pursuant to this provision shall not give rise to any claim against BPCA for additional compensation.

ARTICLE 16 - COMPOSITE DRAWINGS AND COOPERATION

Where Contractor shall perform Work in close proximity to work of other contractors or subcontractors, or where there is evidence that Contractor's Work may interfere with work of other contractors, or subcontractors, Contractor shall assist in arranging space conditions to make satisfactory adjustment for the performance of such work and the Work. Contractor shall prepare composite scale working drawings and specifications as directed by Construction Manager, clearly showing how Contractor's Work is to be performed in relation to work of other contractors or Subcontractors. Such direction may include the following: the scale of the drawings, where the drawings are to be drafted, the number of prints or reproduces, and the requirement of attendance at meetings. The determination as to who shall provide the composite drawings and the contents of the same shall rest exclusively with Construction Manager. Upon request by Construction Manager, Contractor shall sign and be bound by such composite drawings. Such signature shall indicate Contractor's acknowledgment that such drawing is acceptable as related to its Work covered or included in such drawing. If Contractor performs the Work in a manner that causes interference with the work of other contractors, or Subcontractors, Contractor shall make the changes necessary to correct the condition as directed by Construction Manager.

ARTICLE 17 - PROTECTION OF RIGHTS, PERSONS AND PROPERTY

17.1 Accident Prevention

Contractor shall at all times take every precaution against injuries to persons or damage to property and for the safety of persons engaged in the performance of the Work.

17.2 Safety Programs

Contractor shall be responsible for the initiation, maintenance and supervision of safety precautions and programs as prescribed by Construction Manager in connection with the Work.

17.3 Protection of Work and Property

(a) Contractor shall at all times guard BPCA's property from injury or loss in connection with the Work. Contractor shall at all times guard and protect the Site, the Work and adjacent property. Contractor shall replace or make good any such loss or injury unless such loss or injury is caused directly by BPCA.

(b) Contractor shall have full responsibility to install, protect and maintain all Materials in proper condition and forthwith repair, replace and make good any damage thereto until Final Acceptance of the Work.

(c) No provision is included for stresses or loads imposed by construction operations. If Contractor desires to place such loads in excess of the design load (as shown on the Drawings or Specifications), Contractor shall submit to Architect drawings and calculations prepared by, and bearing the seal of a professional engineer, showing the proposed method for supporting such loads, for Architect's review and approval. No loading of any kind in excess of design loads shall be placed on any part of the Project prior to Architect's approval of such submitted drawings and calculations. The costs of the Architect's review shall be reimbursed to BPCA by Contractor.

(d) Contractor shall be responsible for all cutting, fitting or patching that may be required to complete the Work, to make its several parts fit together properly and to make the Work fit together properly with previous and surrounding work. The requirement to cut, fit or patch shall be determined by Construction Manager; provided, that structural elements of the Project shall not be cut, patched, or otherwise altered or repaired without prior authorization by BPCA. Authorization to proceed with remedial operation on any damaged or defective element or portion of the Project shall not constitute a limitation or a waiver of BPCA's, Construction Manager's or Architect's right to require the removal and replacement of any Work which fails to fulfill the requirements of the Contract Documents.

17.4 Adjoining Property

Contractor shall protect all adjoining property and shall repair or replace any such property damaged or destroyed during the progress of the Work.

17.5 Risks Assumed by Contractor

(a) Contractor solely assumes the following risk whether such risk arises from acts or omissions (whether negligent or not and whether supervisory or otherwise) of BPCA, Construction Manager, of Architect or Contractor, of any Subcontractor, of any Materialman, of third persons or from any other cause, including unforeseen obstacles and difficulties which may be encountered in the prosecution of the Work, whether such risk is within or beyond the control of Contractor and whether such risk involves any legal duty, primary or otherwise, imposed upon BPCA:

the risk of loss or damage, direct or indirect, of whatever nature, to the Work or to any Materials furnished, used, installed or received by BPCA, Contractor or any Subcontractor, Materialmen or workmen performing services or furnishing Materials for the Work, whether such Work or Materials are stored at the Site or at an offsite location in accordance with Section 5.4 hereof. Contractor shall bear such risk of loss or damage until Final Acceptance of the Work by BPCA or until completion of such Materials or removal of such Materials from the Site following a determination that they will no longer be needed for the

Project and delivery to the location at which they are to be subsequently stored or disposed of, whichever event occurs last. A portion of the risk of such loss or damage may be insured against under the terms of a “builder’s risk” insurance policy maintained in the name of Contractor, among others, as described in Section 13.1(i). Notwithstanding the status of any actual or potential recovery or claim under the said “builder’s risk” insurance policy, in the event of any loss or damage, Contractor immediately shall repair, replace or make good any such loss or damage.

(b) Contractor shall not, without obtaining express advance permission of BPCA, raise any defense involving in any way the: (i) jurisdiction of any court in which BPCA brings an action arising under this Agreement, (ii) the governmental nature of BPCA, or (iii) the provisions of any statutes respecting suits against BPCA.

(c) Contractor’s obligations under this Article 17 shall not be deemed waived, limited or discharged by the enumeration or procurement of any insurance for liability for damages.

(d) Neither Final Acceptance of the Work nor any payment made hereunder shall release Contractor from Contractor’s obligations under this Article 17. The enumeration elsewhere in this Agreement of particular risks assumed by Contractor or of particular claims for which Contractor is responsible shall not be deemed to limit the effect of the provisions of this Article 17 or to imply that Contractor assumes or is responsible for only risks or claims of the type enumerated; and neither the enumeration in this Article 17 nor the enumeration elsewhere in this Agreement of particular risks assumed by Contractor of particular claims for which Contractor is responsible shall be deemed to limit the risks which Contractor would assume or the claims for which Contractor would be responsible in the absence of such enumerations.

(e) The Contractor is advised that the Work under this Agreement may impose certain obligations and requirements mandated by the U.S. Department of Labor Occupational Safety and Health Administration regulations, Title 29 CFR Part 1926.62 Lead Exposure in Construction, relative to the potential exposure to lead by its employees. The Contractor assumes entire responsibility and liability for complying fully in all respects with these regulations.

(f) Contractor agrees that any unsatisfied claims of the BPCA arising from Contractor’s obligations under this Article 17 or Article 13 (Insurance) may be offset or deducted by BPCA from any payments due to Contractor hereunder.

ARTICLE 18 - USE PRIOR TO ACCEPTANCE BY BPCA

(a) If before Final Acceptance of Work, BPCA desires to use the Site or any part thereof that is completed or partly completed, or to place or install therein or thereon equipment, BPCA shall have the right to do so, and Contractor shall in no way interfere with or object to such use by BPCA.

(b) Such use shall not (1) constitute acceptance of space, systems, Materials or elements of the Work, (2) affect the start of any guaranty period, nor (3) affect the obligations of Contractor to complete the Work in accordance with the requirements of this Agreement or other obligations of Contractor under the Contract Documents.

(c) Contractor shall continue the performance of the Work in a manner that shall not unreasonably interfere with such use by BPCA.

ARTICLE 19 - EXEMPTION FROM SALES AND COMPENSATING USE TAXES

19.1 BPCA Exempt

BPCA is exempt from payment of sales and compensating use taxes of the State of New York and of cities and counties thereof on all Materials that will become an integral component of the completed Project pursuant to this Agreement.

19.2 Certificates

Contractor shall obtain and cause Subcontractors and Materialmen to obtain any and all necessary certificates or other documentation from the appropriate governmental agency or agencies, and use such certificates or other documentation as required by law, rule or regulations to obtain said tax exemption.

ARTICLE 20 - WARRANTIES AND GUARANTIES

20.1 In General

(a) Contractor guarantees that all Work performed and all Materials furnished will conform to the Contract Documents as to kind, quality, functions, design and characteristics of material and workmanship. Contractor shall remove, replace and repair, at its sole cost and expense, all defects in workmanship, Materials, ratings, capacities, or design characteristics occurring in or to the Work including, without limitation, any portion of the Work furnished or performed by any Subcontractor or Materialman, within one year from the date of Final Acceptance. Contractor guarantees that all Work performed and all Materials furnished will conform to the Contract Documents as to kind, quality, functions, design and characteristics of material and workmanship. Contractor hereby acknowledges that BPCA may be required to incur substantial expense if correction of the Work is required particularly if such correction involves the uncovering, removal or replacement of concrete, wiring and piping installed at the Site. If Contractor shall fail to reimburse BPCA for any such expense which may become payable as provided in this paragraph, BPCA shall be entitled to deduct such expense from any payments required to be made by BPCA to Contractor pursuant to this Agreement. Contractor, upon demand, shall pay for any and all damage to any Work affected by or from such defects and all expenses necessary to remove, replace and repair such Work that may be damaged in removing, replacing or repairing such defects.

(b) The benefits of this Article 20 shall inure to the benefit of BPCA and its respective successors and assigns. In addition, any bond or guaranty that may be required of Contractor or any Subcontractor or Materialman under the Contract Documents shall inure to the benefit of BPCA and its respective successors and assigns.

(c) The rights and remedies afforded BPCA under this Section are in addition to and not in lieu of and do not in any way affect, change, alter, modify, vary or prejudice any right, remedy or recourse that BPCA may have under other provisions of this Agreement or pursuant to law.

20.2 Additional Guaranties

In addition to the general guaranty set forth in Section 20.1, any other guaranties set forth in the Contract Documents shall be applicable.

20.3 Repair by Another

If BPCA has requested Contractor to correct any Work and Contractor shall not have completed any correction of the Work as shall be required pursuant to this Article 20 within ten (10) working days after receipt of written notice from BPCA specifying the defect or damage required to be removed, replaced or repaired, or if such defect or damage is of such a nature that it cannot be completely removed, repaired and replaced within such ten (10) day period and Contractor shall not have diligently commenced removing, repairing and replacing such defect and damage within such ten (10) day period or shall not thereafter with reasonable diligence and in good faith proceed to do such work, BPCA may employ such other person, firm or corporation as it may choose, to perform such removal, replacement and repair, and Contractor shall, upon demand, pay to BPCA all amounts that BPCA expends for such removal, replacement and repair.

ARTICLE 21 - INDEMNITY

21.1 Delay or Failure

Contractor and its sureties shall be responsible for and pay to BPCA, all loss, damage and additional cost incurred by reasons or on account of (i) the unexcused delays of

Contractor (determined as set forth in Section 3.1 hereof) or (ii) Contractor's failure to fully and completely carry out the terms of this Agreement.

21.2 Inventions

In addition to the indemnity set forth in Section 17.5(a), Contractor shall indemnify and hold BPCA harmless from all claims, demands or liabilities of any kind or nature, including costs and expenses, for or on account of any patented or unpatented plan, design, invention, article, arrangement, appliance, Material, or preparation, manufactured, used or followed in the performance of or incident to the Work hereunder, and shall defend any and all actions arising out of the same. In the event of any injunction or legal action by reason thereof, which shall operate to stop or retard the Work, BPCA shall have the right to substitute such other articles of like kind as will enable it to complete the Project, and all costs and expenses occasioned thereby shall be borne by Contractor.

21.3 Liability

Contractor shall hold BPCA, BPCPC, the State of New York, Construction Manager and Architect and their servants, agents and employees harmless from and shall indemnify them against any and all liability, loss, cost, damage or expense, including attorneys' fees, by reason of claims of Contractors employees or employees of its Subcontractors or Materialmen for injuries or death or by reason of claims of any other person or persons, including BPCA, BPCPC, the State of New York, Construction Manager, and Architect and their servants, agents or employees, for injuries to person or property or for death occasioned in whole or in part by any act or omission of Contractor, its Subcontractors and Materialmen and their servants, agents and employees whether or not it is contended that BPCA contributed thereto or was responsible therefor by reason of nondelegable duty. If, however, this indemnification is limited by applicable law, then the said indemnification hereby shall be similarly limited to conform with such law, it being the intention that this indemnification shall be as permitted by applicable law. BPCA may retain any monies due or to become due hereunder sufficient to indemnify BPCA, BPCPC, the State of New York, Construction Manager, and Architect and their servants, agents and employees against such injuries, claims, suits, actions, costs or damages should any such claim arise. Contractor shall, at the sole option of BPCA and upon written demand of BPCA, assume the defense in behalf of BPCA, BPCPC, the State of New York, Construction Manager, and Architect or their servants, agents or employees of any action or proceeding commenced against them whether or not Contractor is named as a party therein as part of Contractor's aforementioned obligation to indemnify and hold them harmless.

ARTICLE 22 - PATENTS AND ROYALTIES

(a) In the prosecution of the Work, Contractor will not use or furnish any patented appliance, article, device or method of construction unless it has authorization for such use. Contractor shall pay all royalty and license fees.

(b) Any approval of Materials by Architect shall be construed merely as an approval of their adequacy for the Work.

(c) Contractor will be responsible for all claims against BPCA for the infringement of any patents. Contractor shall defend all suits and claims for infringement of any patent rights and shall indemnify and hold BPCA harmless from loss on account thereof. Any expenses incurred by Contractor in connection with suits and claims will not offset the Contract Price.

(d) Contractor hereby and presently grants to BPCA an irrevocable and non-exclusive license to utilize all of the Contractor's rights in and to all:

- (1) United States patents and patents registered in any other foreign country;
- (2) proprietary knowledge, data and trade secrets; and
- (3) Engineering data and information necessary in connection with and solely in connection with, all work performed by BPCA or other contractors hired by BPCA to complete the work after termination of this Agreement pursuant

to Section 15.1.

Each Purchase Order and Subcontract shall contain a similar clause with respect to the rights of Subcontractor and Materialman in and to the foregoing, in form and substance acceptable to BPCA, granting BPCA the aforesaid license. BPCA shall not be obligated to pay any royalties, license fees or any other consideration to Contractor or any Subcontractor or Materialman for this license. Contractor and each Subcontractor and Materialman shall execute a separate license agreement, in form and substance satisfactory to BPCA, concurrently with the execution of this Agreement, or any Subcontract or Purchase Order, or within ten (10) days thereafter, embodying the terms of this Section. On request, Contractor and each Subcontractor and Materialman shall furnish BPCA with copies of all related Engineering and technical data required to complete the work.

ARTICLE 23 - AS-BUILT DRAWINGS

(a) Contractor shall be furnished by BPCA, at BPCA's expense, with one physical set and two electronic copies (on disk) of 48" x 36" Drawings, on which Contractor, where applicable, shall record the installation of underground utilities, concealed piping, concealed valves and control equipment and record changes in the Work. Such recording shall be kept current and include final and actual sizes as well as the location and elevation of the above figures and offset distances in feet and inches to permanent surface improvements such as buildings, retaining walls or curbs. During the progress of the Work, at the request of Construction Manager and prior to the approval of any Requisition of Contractor, Contractor shall provide a 48" x 36" PDF to BPCA of the up to-date Drawings showing the Work as installed. At completion of the Work, Contractor shall complete, sign and date the 48" x 36" physical set of Drawings and deliver it to Architect.

(b) After review by Architect and return to Contractor for any required changes, Contractor shall furnish to BPCA, at Contractor's expense, at least one physical set and two electronic copies (on disk) of 48" x 36" final Drawings.

ARTICLE 24 - SHOP DRAWINGS AND SAMPLES

24.1 Contractor Submittal

Contractor shall submit to Construction Manager the shop drawings, Product Data and Samples required by the Contract Documents and shall adhere to all submittal and scheduling requirements with respect thereto. After review of such shop drawings, Product Data and Samples by Construction Manager and their approval by Architect, each of such items shall be returned in accordance with the procedures established therefor.

24.2 Contractor's Responsibility

Architect's approval of shop drawings, Product Data and Samples shall not relieve Contractor of responsibility for and deviation from the requirements of the Contract Documents. Contractor shall be responsible for the accuracy of the shop drawings, Product Data and Samples and for the conformity of Documents unless Contractor has notified Architect of the deviation in writing at the time of submission and has received from Architect written approval by separate letter of the specified deviations. Architect's approval shall not relieve Contractor of responsibility for errors or omissions in the shop drawings, Product Data or Samples.

ARTICLE 25 – NOTICES

Whenever it is provided herein that notice, demand, request, consent, approval or other communication shall or may be given to, or served upon, either of the parties by the other, or whenever either of the parties desires to give or serve upon the other any notice, demand, request, consent, approval or other communication with respect hereto, each such notice, demand, request, consent, approval or other communication shall be in writing and shall be effective for any purpose only if given or served by hand with proof of delivery, by delivery by an overnight courier service which obtains receipts, or by mailing the same by express or certified mail, postage prepaid, return receipt requested, addressed to:

(a) if to BPCA:

[NAME], [TITLE] Battery Park City Authority, One World Financial Center,
24th floor, New York, NY 10281

with a copy to: General Counsel, at the same address

or to such other address as BPCA may from time to time designate in the manner
set forth above.

(b) if to Contractor:

[NAME], [COMPANY] located at [ADDRESS]

or to such other addresses as Contractor may from time to time designate in the
manner set forth above.

(c) if to Construction Manager

[NAME], [COMPANY] located at [ADDRESS]

or to such other addresses as the Construction Manager may from time to time
designate in the manner set forth above.

(d) if to Architect/Engineer/etc.

[NAME], [COMPANY] located at [ADDRESS]

or to such other addresses as Architect or Engineer may from time to time designate
in the manner set forth above.

(e) Every notice, demand, request, consent, approval or other communication hereunder
shall be deemed to have been given or served (i) in the case of express or certified mail, on the
date the receipt is dated by the Post Office or express mail carrier, as the case may be, and (ii) in
the case of notice by hand or by overnight courier service, upon delivery, as evidenced by a signed
receipt.

ARTICLE 26 - EMPLOYMENT AND DIVERSITY

26.1 Definitions

The following terms shall have the meanings set forth below for the purposes of
this Article 26:

(a) “**Certified Business.**” A business verified as a minority or women-owned business
enterprise by the Division or such other New York State agency authorized to make such
certification.

(b) “**Diversity Program.**” The program by which BPCA shall monitor Contractor’s
compliance with the requirements set forth in (i) the MBE/WBE Required Participation Plan and
(ii) the Utilization Plan.

(c) “**Division.**” The Division of Minority and Women’s Business Development of the
New York State Department of Economic Development.

(d) “**Director.**” The Director or the Executive Director of the Division.

(e) “**Directory.**” The directory of certified businesses prepared by the Director for use by
BPCA and contractor in complying with the provisions of the Executive Law of the State of New
York, Article 15-A.

(f) “**MBE/WBE Required Participation Plan.**” The plan previously submitted by
Contractor to BPCA listing the certified MBEs and/or WBEs which the Contractor intends to use

in the performance of this agreement in order to ensure that MBEs and WBEs are awarded a fair share of the total dollar value that is to be paid for the Work.

(g) **“Minority” or “Minority Group Member.”** A United States citizen or permanent resident alien who is and can demonstrate membership in one of the following groups:

- (1) Black persons having origins in any of the Black African racial groups;
- (2) Hispanic persons of Mexican, Puerto Rican, Dominican, Cuban, Central or South American descent of either Indian or Hispanic origin, regardless of race;
- (3) Native American or Alaskan native persons having origins in any of the original peoples of North America; or
- (4) Asian and Pacific Islander persons having origins in any of the Far East countries, South East Asia, the Indian subcontinent or the Pacific Islands.

(h) **“Minority-owned Business Enterprise” (“MBE”).** A business enterprise, including a sole proprietorship, partnership or corporation that is:

- (1) at least 51 percent owned by one or more Minority Group Members;
- (2) an enterprise in which such Minority ownership is real, substantial and continuing;
- (3) an enterprise in which such Minority ownership has and exercises the authority to control and operate, independently, the day-to-day business decisions of the enterprise; and
- (4) an enterprise authorized to do business in the State of New of New York and is independently owned and operated.

(i) **“Subcontract.”** An agreement providing for a total expenditure in excess of \$25,000 for the construction, demolition, replacement, major repair, renovation, planning or design of real property and improvements thereon between a contractor or consultant and any individual or business enterprise, including a sole proprietorship, partnership, corporation, or not-for-profit corporation, in which a portion of a contractor’s obligation is undertaken or assumed, but shall not include any construction, demolition, replacement, major repair, renovation, planning or design or real property or improvements thereon for the beneficial use of the contractor.

(j) **“Utilization Plan.”** A plan previously submitted by Contractor to BPCA which sets forth the proposed percentages of employees who are either Minority Group Members or women and who will be used by Contractor to perform the Work.

(k) **“Women-owned Business Enterprise” (“WBE”).** A business enterprise, including a sole proprietorship, partnership or corporation that is:

- (1) at least 51 percent owned by one or more United States citizens or permanent resident aliens who are women;
- (2) an enterprise in which the ownership interest of such women is real, substantial and continuing;
- (3) an enterprise in which such women ownership has and exercises the authority to control and operate, independently, the day-to-day business decisions of the enterprise; and
- (4) an enterprise authorized to do business in the State of New York and which is independently owned and operated.

26.2 Equal Employment Opportunities for Minority Group Members and Women

(a) During the performance of the Work, Contractor agrees as follows:

- (1) Contractor shall not discriminate against any employee or applicant for employment because of race, creed, color, national origin, sex, age, disability or marital status; shall undertake or continue existing programs to ensure that Minority Group Members and women are afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex, age, disability or marital status; and shall make and document its good faith effort to achieve prompt and full utilization of Minority Group Members and women at all levels and in all segments of its work force where deficiencies exist.
- (2) At the request of BPCA, Contractor shall request each employment agency, labor union, or authorized representative of workers with which it has a collective bargaining or other agreement or understanding, to furnish a written statement that such employment agency, labor union, or representative will not discriminate on the basis of race, creed, color, national origin, sex, age, disability or marital status and that such union or representative will affirmatively cooperate in the implementation of Contractor's obligations herein.
- (3) Contractor shall state in all solicitations or advertisements for employees that in the performance of the Work, all qualified applicants will be afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex, age, disability or marital status.
- (4) Contractor and any Subcontractor shall be required to submit compliance reports in accordance with this Section 26 relating to their operations and the implementation of the Diversity Program in effect as of the date of execution of this Agreement.
- (5) Contractor shall submit an EEO policy statement to BPCA within seventy-two hours of notice from BPCA of the awarding of this contract to Contractor. If Contractor does not have an existing EEO policy statement, BPCA may provide to Contractor a model statement.

(b) Contractor shall include the provisions of Section 26.2(a) in every Subcontract in such a manner that the provisions will be binding upon each Subcontractor as to the Work in connection with this contract's execution.

(c) Contractor shall comply with the provisions of the Human Rights Law of the State of New York, and all other City, State and Federal statutory and constitutional non-discrimination provisions. Contractor and Subcontractors shall not discriminate against any employee or applicant for employment because of race, creed (religion), color, sex, national origin, sexual orientation, military status, age, disability, predisposing genetic characteristic, marital status or domestic violence victim status, and shall also follow the requirements of the Human Rights Law with regard to non-discrimination on the basis of prior criminal conviction and prior arrest

(d) Miscellaneous

- (1) The provisions of this Section shall not be binding upon Contractor or its Subcontractors in the performance of Work or the providing of services, or any other activities that are unrelated, separate or distinct from this Agreement as expressed by its terms.
- (2) The requirements of this Section shall not apply to any employment outside New York State, or application for employment outside such state, or solicitations, or advertisements therefore, or any existing programs of diversity regarding employment outside New York State and the effect of contract provisions required by this section shall be so limited.

(e) Enforcement

The parties agree to be bound by provisions of Article 15-A of the Executive Law of the State of New York and by the regulations adopted thereunder.

26.3 Workforce Participation

(a) Contractor is required to make and document good faith efforts to achieve the participation of _____ % Minority Group Members and _____ % women in the workforce for each trade or services utilized by Contractor in the Work as set forth in the Utilization Plan.

(b) To ensure compliance with this Section, Contractor shall submit a staffing plan to document the composition of the proposed workforce to be utilized in the performance of this contract by the specified categories listed, including ethnic background, gender, and Federal occupational categories. Contractors shall complete the staffing plan form and submit it as part of their bid or proposal or within a reasonable time, but no later than the time of award of the contract.

(c) The participation for Minority Group Members and women employees must be substantially uniform throughout the work.

(d) Contractor shall not participate in the transfer of Minority Group Member employees or women employees from employer to employer or from project to project for the sole purpose of satisfying the participation goals above set forth.

(e) In achieving such participation, Contractor is required to make good faith efforts to find and employ qualified Minority Group Members and women supervisory personnel and journeymen.

(f) Contractor shall meet with BPCA, and such other persons as BPCA may invite, on a periodic basis as required by BPCA to discuss issues relating to Minority Group Members and women workforce participation. At such meetings, Contractor shall report on the names of its Subcontractors then engaged in construction on the project to which the Work relates or which within 60 days are scheduled to be engaged in construction of such project, on the nature of the work and anticipated construction schedule of Contractor and Subcontractors, on the anticipated hiring needs of Contractors and Subcontractors, on the names of the responsible foremen directly employed by Contractor, and such information requested by BPCA that will then promote the employment of Minority Group Members and women. Contractor shall use its best efforts to obtain the above information and shall, upon BPCA's request, cause its Subcontractors to attend said meetings and provide the above information.

(g) Compliance reports with respect to the Utilization Plan ("**Utilization Compliance Reports**") which shall be submitted to BPCA's Diversity officer on a monthly basis and shall be in accordance with the following:

- (1) BPCA may require that Contractor submit Utilization Compliance Reports for the duration of this contract to BPCA regarding Contractor's operation and implementation of the Utilization Plan portion of the Diversity Program in effect as of the date of execution of this Agreement.
- (2) The Utilization Compliance Reports shall include information on any Subcontractor involved in the performance of the contract with regard to the Subcontractor's compliance with the Diversity Program.
- (3) The Utilization Compliance Reports shall include, but are not limited to the following:
 - (i) a breakdown of the Subcontractors by ethnic background, gender or such other categories as may be required by BPCA;
 - (ii) the actions the Contractor and Subcontractors have taken to meet the

components of the Diversity Program;

- (iii) how Contractor and Subcontractors intend to utilize participation of Minority Group Members and women in their workforce in connection with the performance of the Work and timetables therefor during the remainder of their performance of the Work.

(h) Any failure by Contractor to submit a required Utilization Compliance Report, including information on any of its Subcontractor's compliance, may be deemed a breach of contract with respect to this Agreement.

(i) Contractor shall include the provisions in Section 26.3 in every Subcontract, and such provisions shall be binding upon each Subcontractor.

26.4 Minority Business Enterprise (MBE) Participation and Women's Business Enterprise Participation

(a) Contractor shall make good faith efforts to attain the participation of twenty percent (20%) MBEs and/or WBEs in the total dollar value of the Work.

(b) The total dollar value of the Work for purposes of determining compliance with the MBE/WBE Required Participation Plan shall be calculated as follows:

- (1) if an MBE and WBE is not the Contractor -- the dollar value of the Work subcontracted to MBEs and WBEs; provided, however, that where materials are purchased from an MBE or WBE that acts merely as a conduit for goods manufactured or produced by a non-MBE or non-WBE, only that portion of the price paid for such materials that will accrue as profit to the MBE or WBE and/or the Fee received by the MBE or WBE shall be included;
- (2) if Contractor is a joint venture including one or more MBEs or WBEs as joint venturers -- the Contract Price multiplied by the percentage of the joint venture's profits (or losses) that are to accrue to the MBE and WBE joint venturer(s) under the joint venture agreement; and
- (3) if an MBE or WBE is Contractor or where Contractor is a joint venture consisting entirely of MBEs or WBEs -- the Contract Price.

(c) Monthly compliance reports with respect to the MBE/WBE Required Participation Plan ("**MBE/WBE Compliance Reports**") shall be required as follows:

- (1) MBE/WBE Compliance Reports shall be submitted to BPCA on a monthly basis and shall include information with respect to:

- (i) dividing the Work to be subcontracted into smaller portions, where economically and technically feasible;

- (ii) actively and affirmatively making a good faith effort to solicit bids for subcontracts from qualified MBEs and WBEs identified in the directory of certified businesses available at the office of the BPCA's Diversity Officer, including the circulation of solicitations to Minority contractor associations. Contractor shall maintain records detailing the efforts made to provide for meaningful MBE and WBE participation in the Work, including the names and addresses of all MBEs and WBEs contacted and, if any such MBE or WBE is not selected as a joint venture or subcontractor, the reasons for such decision;

- (iii) making plans and specifications for prospective work available to MBEs and WBEs in sufficient time for review;

(iv) utilizing the services and cooperating with those organizations providing technical assistance to BPCA in connection with the participation of MBEs and WBEs in the project to which the Work relates;

(v) encouraging the formation of joint ventures, partnerships or other similar arrangements among subcontractors where appropriate;

(vi) ensuring that provision is made to provide progress payments to MBEs and WBEs on a timely basis; and

(vii) not requiring bonds from and/or providing bonds and insurance for MBEs and WBEs where appropriate, and/or assisting in obtaining bonds and insurance for MBEs and WBEs where feasible.

(2) MBE/WBE Compliance Reports that shall be submitted to the Diversity Department on a monthly basis.

(3) MBE/WBE Compliance Reports shall also include, but not be limited to, the following information:

(i) the name, address and telephone number of each certified MBE and WBE which Contractor is using or intends to use to comply with the MBE/WBE Required Participation Plan.

(ii) a brief description of the contract scope of work to be performed for the Contractor by each certified MBE and WBE and the scheduled dates for performance;

(iii) a statement of whether the Contractor has a written agreement with each certified MBE and WBE which Contractor is using or intends to use, and if requested, copies of such agreements;

(iv) the actual total cost of the contract scope of work to be performed by each certified MBE and WBE for this Agreement; and

(v) the actual amounts of any payments made by Contractor to each certified MBE and WBE as of the date the MBE/WBE Compliance Report was submitted.

(d) Contractor shall provide BPCA with Monthly MBE/WBE and Workforce Utilization Reports, by the last calendar day of each month, in the form of Exhibit [D] hereto. Failure to provide such reports shall be an event of default of Contractor's obligations pursuant to Article 15.1 (a) (1) hereof.

(e) Contractor shall provide proof of payment to all Subcontractors and Materialmen in the form of a waiver of lien or cancelled check, with each request for payment. Failure to provide such proof of payment shall be an event of default of Contractor's obligations pursuant to Article 15.1 (a) (1) hereof.

26.5 Failure to Comply

(a) In accordance with 5 NYCRR §142.13, Contractor acknowledges that if it is found to have willfully and intentionally failed to comply with the MBE/WBE participation goals set forth herein or any other requirements set forth in this Article 26, such finding constitutes a breach of contract and BPCA may withhold payment from the Contractor as liquidated damages.

(b) Such liquidated damages shall be calculated based on the actual cost incurred by BPCA related to BPCA's expenses for personnel, supplies and overhead related to establishing, monitoring, and reviewing certified MBE/WBE programmatic goals and Diversity and Equal Opportunity compliance.

ARTICLE 27 - STANDARD PROVISIONS

27.1 Provision Required by Law Deemed Inserted

Each and every provision of law and governmental regulation required by law to be inserted in the Contract Documents shall be deemed to be inserted therein and this Agreement shall read and shall be enforced as though so included therein, and if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party, this Agreement shall be deemed to be amended to make such insertion or correction. If this Agreement contains any unlawful provision, the same shall be deemed of no effect and shall, upon the application of either party, be deemed stricken from this Agreement without affecting the binding force of the remainder.

27.2 Compliance with Laws, Rules and Regulations

Contractor and each Subcontractor and Materialman shall comply fully with all applicable laws, rules and regulations pertaining to the Project and the Work.

27.3 Applicable Law, Forum and Jurisdiction

This Agreement shall be governed by the laws of the State of New York. All actions or proceedings relating, directly or indirectly, to this Agreement shall be litigated only in courts located within the County of New York. Contractor, any guarantor of the performance of its obligations hereunder (including sureties for Payment and Performance Bonds) (“**Guarantor**”) and their successors and assigns hereby subject themselves to the jurisdiction of any state or federal court located within such county, waive the personal service of any process upon them in any action or proceeding therein and consent that such process be served by certified or registered mail, return receipt requested, directed to the Contractor and any successor at Contractor’s address hereinabove set forth, to Guarantor and any successor at the address set forth in the instrument of guaranty and to any assignee at the address set forth in the instrument of assignment. Such service shall be deemed made as of the date of the return receipt.

27.4 No Third Party Rights

Nothing in this Agreement shall create or shall give to third parties any claim or right of action against BPCA, Construction Manager, or Architect beyond such as may legally exist irrespective of this Agreement.

27.5 Exculpation; Limitation of Liability

In no event shall any claim be asserted under this Agreement by Contractor or any Subcontractor or Materialman against any member, officer, employee, lessee, consultant or agent of BPCA, Construction Manager, or Architect. By execution of this Agreement, Contractor agrees to look solely to BPCA with respect to any claim which may arise. It is hereby understood by and between the parties hereto that BPCA shall only be liable to the extent of monies available to BPCA.

27.6 Protection of Lives and Health

(a) Contractor’s, Subcontractor’s and Materialman’s attention is specifically called to the rules and regulations, codes and bulletins of the New York State Department of Labor. Attention is also directed to the standards imposed under the Federal Occupational Safety and Health Act of 1970, as amended.

(b) Contractor shall maintain an accurate record of all cases of death, occupational disease, and injury requiring medical attention or causing loss of time from work, arising out of and in the course of employment on work under this Agreement, and shall immediately notify BPCA in writing of any injury which results in hospitalization or death. Contractor shall also complete and submit to BPCA the “Incident Report Form” attached hereto and made a part hereof as Exhibit F within 48 hours of the occurrence of any such injury.

(c) Contractor alone shall be responsible for the safety, efficiency and adequacy of contractor’s work, plant, appliances and methods, and for any damage that may result from the failure, or the improper construction, maintenance, or operation of such work, plant, appliances

and methods.

27.7 Waiver of Immunity Clause

Contractor hereby agrees to the provisions of New York Public Authorities Law Section 2875, which require that a person, when called before a grand jury, head of a State department, temporary State commission, or other State agency, the Organized Crime Task Force in the State Department of Law, head of a department or other City agency, which is empowered to compel the attendance of witnesses and examine them under oath, to testify in an investigation concerning any transaction or contract had with the State, any political subdivision thereof, or with any public department, agency or official of the State, a public authority or with any public department, agency or official of the State or of any political subdivision thereof or of a public authority, that person must sign a waiver of immunity against subsequent criminal prosecution or to answer any relevant questions concerning such transaction or contract. Upon the refusal of any person to comply with such provisions:

(a) such person, and any firm, partnership or corporation of which such person is a member, partner, director or officer shall be disqualified from thereafter selling to or submitting bids to or receiving awards from or entering into any contracts with any public authority or official thereof, for goods, work or services, for a period of five (5) years after such refusal; and

(b) any and all contracts made with any public authority or official thereof, by such person, and by any firm, partnership or corporation of which such person is a member, partner, director or officer may be canceled or terminated by the public authority without incurring any penalty or damages on account of such cancellation or termination, but any monies owing by the public authority for goods delivered or work done prior to the cancellation or termination shall be paid.

27.8 Prohibited Interests

No official of BPCA who is authorized in such capacity and on behalf of BPCA to negotiate, make, accept, or approve, or take part in negotiating, making, accepting, or approving any Architectural, Engineering, inspection, Purchase Order or any Subcontract in connection with the Work, shall become directly or indirectly interested personally in the Agreement. Contractor is advised that no official or employee of BPCA is permitted to indirectly solicit, accept, or receive gifts whether in the form of money, service, loan, travel, entertainment, hospitality, thing or promise, or in any other form. No officer, employee, architect, attorney, engineer, inspector or consultant of or for BPCA who is authorized in such capacity and on behalf of BPCA to exercise any legislative, executive, supervisory or other similar functions in connection with the Work, shall become directly or indirectly interested personally in the Agreement, any Purchase Order, Subcontract, insurance contract, or any other contract pertaining to the Work.

27.9 Labor Provisions

(a) It is hereby agreed that all applicable provision of the Labor Law of the State of New York shall be carried out in the performance of the Work.

(b) Contractor specifically agrees, as required by New York Labor Law Sections 220 and 220-d as amended, that:

- (1) no laborer, workman or mechanic, in the employ of Contractor, Subcontractor, Materialman or other person doing or contracting to do the whole or any part of the Work contemplated by the Contract Documents shall be permitted or required to work more than eight (8) hours in any one calendar day or more than five (5) days in any one week, except in the emergencies set forth in the Labor Law.
- (2) the wages paid for a legal day's work shall be not less than the prevailing rate of wages as defined by law;
- (3) the minimum hourly rate of wage to be paid shall be not less than that stated in the Contract Documents and as shall be designated by the Industrial

Commissioner of the State of New York; and

- (4) Contractor shall post at appropriate conspicuous points at the Site, a schedule showing all determined minimum wage rates for the various classes of laborers and mechanics to be engaged in the Work and all deductions, if any, required by law to be made from unpaid wages actually earned by the laborers and mechanics so engaged.

(c) The minimum wage rates, if any, herein specified for apprentices shall apply only to persons working with the tools of the trade which such persons are learning under the direct supervision of journeymen mechanics. Except as otherwise required by law, the number of apprentices in each trade or occupation employed by Contractor or any Subcontractor or Materialman shall not exceed the number permitted by the applicable standards of the New York State Department of Labor, or, in the absence of such standards, the number permitted under the usual practice prevailing between the unions and the employers' association of the respective trades or occupations.

(d) All employees of Contractor and each Subcontractor and Materialman shall be paid in accordance with the provisions of the Labor Law.

(e) Contractor agrees that, in case of underpayment of wages to any worker engaged in the Work by Contractor or any Subcontractor or Materialman, BPCA shall withhold from Contractor out of payments due an amount sufficient to pay such worker the difference between the wages actually paid such worker for the total number of hours worked, and that BPCA may disburse such amount so withheld by BPCA for and on account of Contractor to the employee to whom such amount is due. Contractor further agrees that the amount to be withheld pursuant to this paragraph may be in addition to the percentages to be retained by BPCA pursuant to other provisions of the Contract Documents.

(f) The Labor Law provides that this Agreement may be terminated for cause and no sum paid for any Work done thereunder upon a second conviction for willfully paying less than:

- (1) the stipulated wage scale as set forth in New York Labor Law Section 220, subdivision 3, as amended, or
- (2) less than the stipulated minimum hourly wage scale as specified in Labor Law, Section 220-d, as amended.

(g) Contractor specifically agrees, as required by the New York Labor Law Section 220-e, as amended, that:

- (1) in the hiring of employees for the performance of Work under this Agreement or any Subcontract or Purchase Order hereunder, or for the manufacture, sale or distribution of Materials, equipment or supplies hereunder, but limited to operations performed within the territorial limits of the State of New York, no Contractor, Subcontractor, Materialman or any person acting on behalf of such Contractor or Subcontractor, or Materialman, shall by reason of race, creed, color, sex or national origin discriminate against any citizen of the State of New York who is qualified and available to perform the work to which the employment relates;
- (2) no Contractor, Subcontractor, Materialman, or any person on behalf of such Contractor, Subcontractor or Materialman shall, in any manner, discriminate against or intimidate any employee hired for the performance of work under this Agreement on account of race, creed, color, sex or national origin;
- (3) there may be deducted from the amount payable to Contractor, by BPCA under this Agreement, a penalty of \$50.00 for each person for each calendar day during which such person was discriminated against or intimidated in violation of the terms of this Agreement; and

- (4) this Agreement may be canceled or terminated for cause by BPCA and all monies due or to become due hereunder may be forfeited for a second or any subsequent violation of the terms or conditions of this Section of this Agreement.

(h) Where applicable, Contractor agrees to settle labor disputes in accordance with the provisions of The New York Plan For The Settlement of Jurisdictional Disputes Between The Building And Construction Trades Council Of Greater New York And The Building Trades Employers' Association Of The City of New York.

27.10 Disputes Resolution Procedure

(a) The provisions of this Article shall constitute Contractor's sole means for challenging any determination, order or other act or omission of BPCA or otherwise asserting against BPCA any claim of whatever nature arising under, or in any way relating to, this Agreement (any such challenge or assertion by Contractor being herein referred to as a "**Dispute(s)**"). Exhaustion of these dispute resolution procedures, including the judicial review set forth below, shall be the parties' sole remedy in connection with any Dispute.

(b) The parties to this Agreement hereby authorize and agree to the resolution of all Disputes arising out of, under or in connection with, this Agreement in accordance with the following and pursuant to the procedures set forth in paragraph (c) of this Section 27.10. With respect to any Dispute which relates in whole or primary part to technical issue(s) under this Agreement including, without limitation, determinations as to the acceptability or fitness of any Work, the meaning or interpretation of the Contract Documents, the question of whether any Work falls within the scope of the Specifications set forth in the Contract Documents, the acceptability of any proposed substitutions, modifications or other submissions under this Agreement, the disapproval of proposed Subcontractors or Materialmen (to the extent such disapproval is related to technical issues), the extension of time to the extent related to a technical matter, the question of whether substantial completion or final completion has been achieved, the parties hereby authorize the General Counsel of BPCA, or his/her designee, (hereinafter referred to as the "**Arbiter**"), acting personally, to render a final and binding decision.

(c) All Disputes shall be initiated through a written submission by either party (such submission to be hereinafter referred to as the "**Dispute Notice**") to the Arbiter within ten (10) days of the determination, order or other act or omission which is the subject of the Dispute. Within ten (10) days after the submission of such Dispute Notice, the party initiating the Dispute shall provide the Arbiter with all evidence and other pertinent information in support of the party's position and/or claim. Within thirty (30) days from the date of the Dispute Notice, the party against whom the Dispute Notice was filed shall submit any and all materials which it deems pertinent to the Arbiter. Upon submission of a Dispute Notice to the Arbiter, the Arbiter shall render its decision in writing and deliver a copy of same to the parties within a reasonable time not to exceed sixty (60) days after the receipt of all materials. In rendering such decision, the Arbiter may seek such technical or other expertise as it shall deem necessary or appropriate (notifying both parties to the Dispute when he/she so seeks such other information or expertise) and seek any such additional oral and/or written argument or materials from either or both parties to the Dispute as he/she deems fit. The Arbiter shall have the discretion to extend the time for submittals required hereunder. The Arbiter's ability to render and the effect of a decision hereunder shall not be impaired or waived by any negotiations or settlement offers in connection with the matter presented, whether or not the Arbiter participated therein, or by any prior decision of others, or by any termination or cancellation of this Agreement. The decision of the Arbiter shall be final and binding on both parties to this Agreement.

(d) It is expressly understood and agreed that the pendency of a Dispute hereunder shall at no time and in no respect constitute a basis for any modification, limitation or suspension of Contractor's obligation to fully perform in accordance with this Agreement and that Contractor shall remain fully obligated to perform the Work notwithstanding the existence of any such Dispute.

27.11 Additional Provisions Relating to the Prosecution of Claims for Money Damages

(a) Except as otherwise provided in this Agreement, if Contractor claims or intends to claim compensation or money damages for any damage or loss sustained by reason of any determination, order or other act or omission of BPCA, Contractor shall furnish a written notice to the Arbiter setting forth the nature of the claim and the extent of the damage sustained within ten (10) days of the occurrence of such loss or damages. This written notice shall constitute Contractor's submission to the Arbiter for the purposes of requesting the Arbiter's determination in accordance with Section 27.10 above. Any such claim shall state as fully as then possible all information relating thereto and shall be supported by any then available documentation, including daily records showing all costs incurred. Such information shall be supplemented with any and all further information, including information relating to the quantum of losses or damages sustained, as soon as practicable after the information becomes or reasonably should become known to the Contractor.

(b) Any claim for compensation or monetary damages, the successful prosecution of which necessarily depends upon a technical determination favorable to Contractor, may not proceed unless and until Contractor first obtains such a favorable determination with respect to the technical issue and must be made within ten (10) days of such determination; moreover, Contractor must submit to the Arbiter any documentation or proof in support of the monetary claim within fifteen (15) days of such determination in order to proceed with such a claim. This written notice shall constitute Contractor's submission to the Arbiter for the purposes of requesting the Arbiter's determination in accordance with Section 27.10 above.

(c) Compliance with the provisions hereof shall constitute a condition precedent to the Contractor's submission of a Dispute pursuant to Section 27.10 with respect to any claim for compensation or monetary damages and the Contractor shall be deemed to have waived any claim not submitted in accordance herewith.

(d) Any final determination of the Arbiter with respect to a Dispute initiated pursuant to this Article 27 shall be subject to review solely in the form of a challenge following the decision by the Arbiter in a Court of competent jurisdiction of the State of New York, County of New York, under Article 78 of the New York Civil Practice Law and Rules or a United States Court located in New York City under the procedures and laws applicable in that court, it being understood the review of such Court shall be limited to the question of whether or not the Arbiter's determination is arbitrary, capricious or lacks a rational basis. No evidence or information shall be introduced or relied upon in such proceeding which has not been duly presented to the Arbiter in accordance with this Article 27.

27.12 Limitation on Actions

(a) Subject to the provisions of Section 27.11, no action or proceeding shall lie or shall be maintained by Contractor against BPCA, Construction Manager, or Architect unless (i) such action or proceeding shall be commenced within six (6) months of the date of the issuance of the Certificate of Substantial Completion to Contractor; or (ii) in the case of an action or proceeding for monies due pursuant to Section 5.7 hereof, or arising exclusively from or pertaining exclusively to work performed after the date of issuance of the Certificate of Substantial Completion, unless such action or proceeding is commenced no later than six (6) months after the issuance of the certificate of final completion to Contractor; or (iii) if this Agreement is terminated by BPCA prior to the issuance of the Certificate of Substantial Completion, unless such action or proceeding is commenced within six (6) months after the date of such termination.

(b) Nothing in this Section 27.12 shall be construed to modify or lengthen a shorter limitations period provided by applicable law.

(c) No action or proceeding shall be commenced by Contractor against BPCA, Construction Manager, or Architect except in the Supreme Court of the State of New York, County of New York.

(d) Nothing in this Section 27.12 shall be construed to suggest that Contractor, under any circumstances, may bring an action or proceeding against Construction Manager, or Architect.

27.13 Waiver of Remedies

Contractor acknowledges that it can be compensated adequately by money damages for any breach of this Agreement which may be committed by BPCA, Construction Manager, or Architect. Contractor agrees that no default, act or omission of BPCA, Construction Manager, or Architect shall constitute a material breach of contract entitling Contractor to cancel or rescind this Agreement or to suspend or abandon performance thereof, other than the failure of BPCA to make a payment of the Contract Price in accordance with the terms hereof solely because sufficient funds to pay the Contract Price have not been appropriated or will otherwise not be made available to BPCA. Contractor hereby waives any and all rights and remedies to which Contractor might otherwise be or become entitled to because of any wrongful act or omission of BPCA, Construction Manager, or Architect except as provided in this Section 27.13 and Contractor's right to money damages.

27.14 Modification of Agreement

No change in or modification, termination or discharge of this Agreement in any form whatsoever shall be valid or enforceable unless it is in writing and signed by the party to be charged therewith or its duly authorized representative, provided, however, that any change in or modification, termination or discharge of this Agreement expressly provided for in this Agreement shall be effective as so provided.

27.15 Signs and Parking

Contractor agrees that it shall not display on or about the Site any sign, trademark or other advertisement without the approval of BPCA and Construction Manager. Contractor shall not and shall not permit any of its Subcontractors or Materialmen to park any vehicles on the Site.

27.16 Entire Agreement

The Contract Documents constitute the entire Agreement between the parties and incorporate all prior understandings in connection with the subject matter hereof.

27.17 Rights and Remedies

The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law. No action or failure to act by BPCA, Construction Manager, or Architect or Contractor including, but not limited to, the making of any payment or permitting Contractor to continue with the performance of the Work shall constitute a waiver of any right or duty afforded any of them under this Agreement, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach thereunder, except as may be specifically agreed in writing.

27.18 Participation in International Boycott Prohibited

Contractor agrees, as a material condition of this Agreement, that neither Contractor nor any substantially owned or affiliated person, firm, partnership or corporation has participated or is participating or shall participate in an international boycott in violation of the provisions of the United States Export Administration Act of 1969, as amended, or the United States Export Administration Act of 1979, as amended, or the Regulations of the United States Department of Commerce promulgated thereunder. This Agreement shall be rendered forfeit and void by the Comptroller of the State of New York if, subsequent to execution, such person, firm, partnership or corporation has been convicted of a violation of the provisions of either of such federal acts or such Regulations or has been found upon the final determination of the United States Commerce Department or any other appropriate agency of the United States to have violated the provisions of either of such federal acts or such Regulations.

27.19 Compliance with "Buy-American" Statutes

Contractor and any substantially owned or affiliated person, firm, partnership or corporation agrees to comply with the New York Public Authorities Law, Section 2603-A as amended (affects steel or steel products).

27.20 Permitted Successors

References to parties and entities herein shall be deemed to include their permitted successors.

27.21 MacBride Fair Employment Principles

If the amount payable to Contractor under this Agreement is greater than \$15,000, Contractor hereby certifies that it and/or any individual or legal entity in which it holds a 10% or greater ownership interest, and any individual or legal entity that holds a 10% or greater ownership interest in it, either have no business operations in Northern Ireland; or shall take lawful steps in good faith to conduct any business operations they have in Northern Ireland in accordance with the MacBride Fair Employment Principles relating to nondiscrimination in employment and freedom of workplace opportunity regarding such operations in Northern Ireland, as set forth in New York State Finance Law Article XI Section 165(5), and shall permit independent monitoring of their compliance with such Principles.

27.22 Iran Divestment Act

By signing this Agreement, each person and each person signing on behalf of any other party certifies, and in the case of a joint bid or partnership each party thereto certifies as to its own organization, under penalty of perjury, that to the best of its knowledge and belief that each person is not on the list created pursuant to paragraph (b) of subdivision 3 of Section 165-a of the State Finance Law.

27.23 Termination for Failure to Disclose Under State Finance Law §139k

BPCA reserves the right to terminate this Agreement in the event it is found that the certification filed by Contractor pursuant to New York State Finance Law §139-k was intentionally false or intentionally incomplete. Upon such finding, BPCA may exercise its termination right by providing written notification to the Contractor in accordance with the written notification terms of this contract. If a contract is terminated in accordance with State Finance Law §139k(5), BPCA, its subsidiaries and affiliates, will include a statement in BPCA's procurement record describing the basis for any action taken under the termination provision.

27.24 Labor Peace

The Contractor and its Subcontractors and Materialmen shall not employ on the Work any labor, materials or means whose employment, or utilization during the course of this Agreement, may tend to or in any way cause or result in strikes, Work stoppages, delays, suspension of Work or similar troubles by workers employed by the Contractor or its Subcontractors, Materialmen, or by any of the trades working in or about the buildings and premises where Work is being performed under this Agreement, or by other contractors or their subcontractors pursuant to other agreements, or on any other building or premises owned or operated by BPCA, its contractors or affiliates. Any violation by the Contractor of this requirement may be considered as proper and sufficient cause for declaring the Contractor to be in default, and for BPCA to take action against Contractor as set forth in Article 15 of this Agreement, or such other Section of this Agreement as BPCA may deem proper.

27.25 Comptroller's Approval

If this Agreement is considered an "eligible contract," as defined by New York Code, Rules and Regulations Title 2 Part 206.2, it is subject to the New York State Comptroller's approval, and therefore shall not be valid and enforceable until that approval has been obtained. A contract is considered an "eligible contract," as defined by Title 2 of NYCRR Part 206.2, if it is not a specifically exempt contract, is executed by a state authority on or after March 1, 2010, the aggregate consideration under the contract may reasonably be valued in excess of one million dollars (including all reasonably anticipated renewals and amendments), AND the contract (A) was or shall be awarded on a single-source basis, sole-source basis or pursuant to any other method of procurement that is not a competitive procurement OR (B) shall be paid in whole or in part with monies appropriated by the State, either directly to a state authority or to a state agency that pays the money to a state authority.

27.26 Key Person/Personnel

The parties understand that in entering into this Agreement, BPCA has relied upon Contractor's representation that [name(s) and title(s)] (hereinafter the "**Key Personnel**") will be directly and consistently involved in supervising the Work and actively engaged in the day-to-day management of the Work, which shall include attending mandatory Project meetings. If the Key Personnel is/are not available as described herein, or if the Key Personnel depart from the firm or severs his/her/their relationship with the Contractor, or for whatever other reason is/are not available to work on the Project, then BPCA shall have the right to terminate this Agreement. The parties also agree that at any time during the course of the Work, BPCA may designate additional or substitute key personnel to perform the Work. Contractor agrees to make the additional or substituted key personnel available under the same conditions set forth herein.

27.27 Form of Agreement Not an Offer

Notwithstanding anything herein to the contrary, the submission of this form of Agreement by BPCA to Contractor shall not constitute an offer, and execution hereof by Contractor shall not be considered acceptance of an offer. A binding contract between the parties shall exist only if and at such time as both parties have executed this Agreement.

27.28 General Responsibility

(a) The Contractor shall at all times during the Agreement term remain responsible. The Contractor agrees, if requested by BPCA or its designee, to present evidence of Contractor's continuing legal authority to do business in New York State, integrity, experience, ability, prior performance, and organizational and financial capacity.

(b) BPCA or its designee, in its sole discretion, reserves the right to suspend any or all activities under this Agreement, at any time, when BPCA discovers information that calls into question the responsibility of Contractor. In the event of such suspension, Contractor will be given written notice outlining the particulars of such suspension. Upon issuance of such notice, Contractor must comply with the terms of the suspension order. Activity under the Agreement may resume at such time as BPCA or its designee issues a written notice authorizing a resumption of performance under the Agreement.

(c) Upon written notice to the Contractor, and a reasonable opportunity to be heard with appropriate BPCA officials or staff, the Agreement may be terminated by BPCA or its designee at Contractor's expense where Contractor is determined by BPCA or its designee to be nonresponsible. In such event, BPCA or its designee may complete the contractual requirements in any manner BPCA may deem advisable and pursue available legal or equitable remedies for breach.

27.29. Counterparts

This Agreement may be executed in any number of counterparts, all of which taken together shall constitute one instrument, but the Agreement shall not be deemed effective unless signed by all parties.

27.30. Section Headings

Section headings contained in this Agreement are for convenience only and shall not be considered for any purpose in governing, limiting, modifying, construing or affecting the provisions of this Agreement and shall not otherwise be given legal effect.

27.31. Subordination of Terms in the Exhibits

In the event of a conflict of terms, the terms stated in Sections 1-27 herein, shall take precedence over and shall prevail over any printed, typed, or handwritten terms located in the Exhibits.

SIGNATURE PAGE FOLLOWS

IN WITNESS WHEREOF, the parties hereto have executed this Agreement, as of the date first above written.

BATTERY PARK CITY AUTHORITY, d/b/a
HUGH L. CAREY BATTERY PARK CITY AUTHORITY

By: _____

Name: _____

Title: _____

[CONTRACTOR NAME]

By: _____

Name: _____

Title: _____

FEIN # [???

EXHIBIT D

COST PROPOSAL

(Proposer to submit executed Cost Proposal on its letterhead)

Date:

Battery Park City Authority
One World Financial Center - 24th Floor
New York, New York 10281

Attention: Mr. Michael LaMancusa
Contracts Administrator

Dear Mr. LaMancusa,

The undersigned (the "Proposer") hereby offers to provide all work and services necessary to complete the Phase 4 Pile Remediation Construction Services - North Cove Marina Project (the "Project") for the sum written below.

A. Base Proposal

A total Not to Exceed amount of \$_____ (_____ Dollars and _____ Cents) to perform all work associated with the Project and as described in the Project's Request for Proposals at Exhibit A (the "Scope of Work").

B. Schedule of Values and Labor Rates

1. The Proposer has submitted with its Cost Proposal an itemized cost for the Work, according to the attached Schedule of Values.
2. The Proposer has submitted with its Cost Proposal, labor rates for all trades, including all costs except overhead and profit. Rates shown include base hourly rate, overtime rate, insurance and benefits.

Name of Proposer:

By: _____

Title: _____

EXHIBIT E
LABOR RATES

The following labor rates are to be listed by craft and classification (Foreman, Journeyman, etc.) and are to include base wages, benefits, taxes, insurance and payroll costs complete. Overhead and profit are not to be included:

| <u>CRAFT</u> | <u>CLASSIFICATION</u> | <u>HOURLY RATES</u> | <u>OVERTIME</u> |
|--|------------------------------|----------------------------|------------------------|
| <u>LABORER</u> <u>CONCRETE</u> | _____ | _____ | _____ |
| <u>CARPENTER</u> | _____ | _____ | _____ |
| <u>IRON WORKER</u> | _____ | _____ | _____ |
| <u>LABORER</u> | _____ | _____ | _____ |
| <u>LABORERS - LESS</u> <u>SKILLED</u> | _____ | _____ | _____ |
| <u>OPERATING</u> <u>ENGINEER</u> | _____ | _____ | _____ |
| <u>FIELD</u> <u>SUPERVISOR</u> | _____ | _____ | _____ |
| <u>FOREMAN</u> | _____ | _____ | _____ |
| <u>TEAMSTER</u> | _____ | _____ | _____ |
| <u>ELECTRICIAN</u> | _____ | _____ | _____ |
| <u>PLUMBER</u> | _____ | _____ | _____ |

<Name of Company>
<Name of Proposer>

Signed Date

By: <Printed Name>

EXHIBIT F

SCHEDULE OF VALUES

(attached)

Phase IV Battery Park City Authority Pile Remediation Project
Schedule of Values - BID FORM

| | Bid Item | REPAIR DETAIL | EST. QUANTITY | UNIT | UNIT PRICE | EXTENDED PRICE |
|-----------|---|------------------|------------------|------|------------|----------------|
| A | Mobilization / Demobilization | | 1 | LS | | |
| B | General Conditions | | 1 | LS | | |
| C | Performance Bond | | 1 | LS | | |
| D | Protective Pile Encasements | A | 2,396 | LF | | |
| E | Backwall Batter Pile Encasement | D | 71 | LF | | |
| F | Backwall Three Side Encasement | E2 | 84 | LF | | |
| G | Backwall Corner Encasement | E1 | 7 | LF | | |
| H | Excavation/Backfill - Soft Bottom | A | 105 | EA | | |
| I | Excavation/Backfill - Hard Bottom | A | 34 | EA | | |
| J | Excavation/Backfill - Hard Bottom <2ft | B | 54 | EA | | |
| K | Alternate Embedment Detail (AED) | B | 31 | EA | | |
| L | Riprap Obstruction Detail (ROD) | C | 23 | EA | | |
| M | Sand Bags | | 4,000 | EA | | |
| N | Grout Bags | | 1,000 | EA | | |
| O | Concrete Core Plug | F | 4 | EA | | |
| Q | Extended Pile Encasement | A1 | 25 | LF | | |
| P | Deduct - BPCA Supplied FRP Forms | | 1 | LS | (50,000) | |
| BID TOTAL | | | | | | |

| | VALUE ENGINEERED DEDUCT | REPAIR DETAIL | EST. QUANTITY | UNIT | UNIT PRICE | EXTENDED PRICE |
|--------------|-------------------------|------------------|------------------|------|------------|----------------|
| | | | | | | |
| TOTAL DEDUCT | | | | | | |

Note: The estimated quantities listed in this Schedule of Values form are approximate only and given as a basis for the uniform comparison of Proposals. BPCA does not expressly or by implication agree that the actual amount of Work or items listed will correspond therewith. The Project's total lump sum amount stated in Proposer's Cost Proposal shall include all Work required in order to complete the Project, even if not specifically mentioned in this Schedule of Values form.

EXHIBIT G

DRAWINGS & SPECIFICATIONS

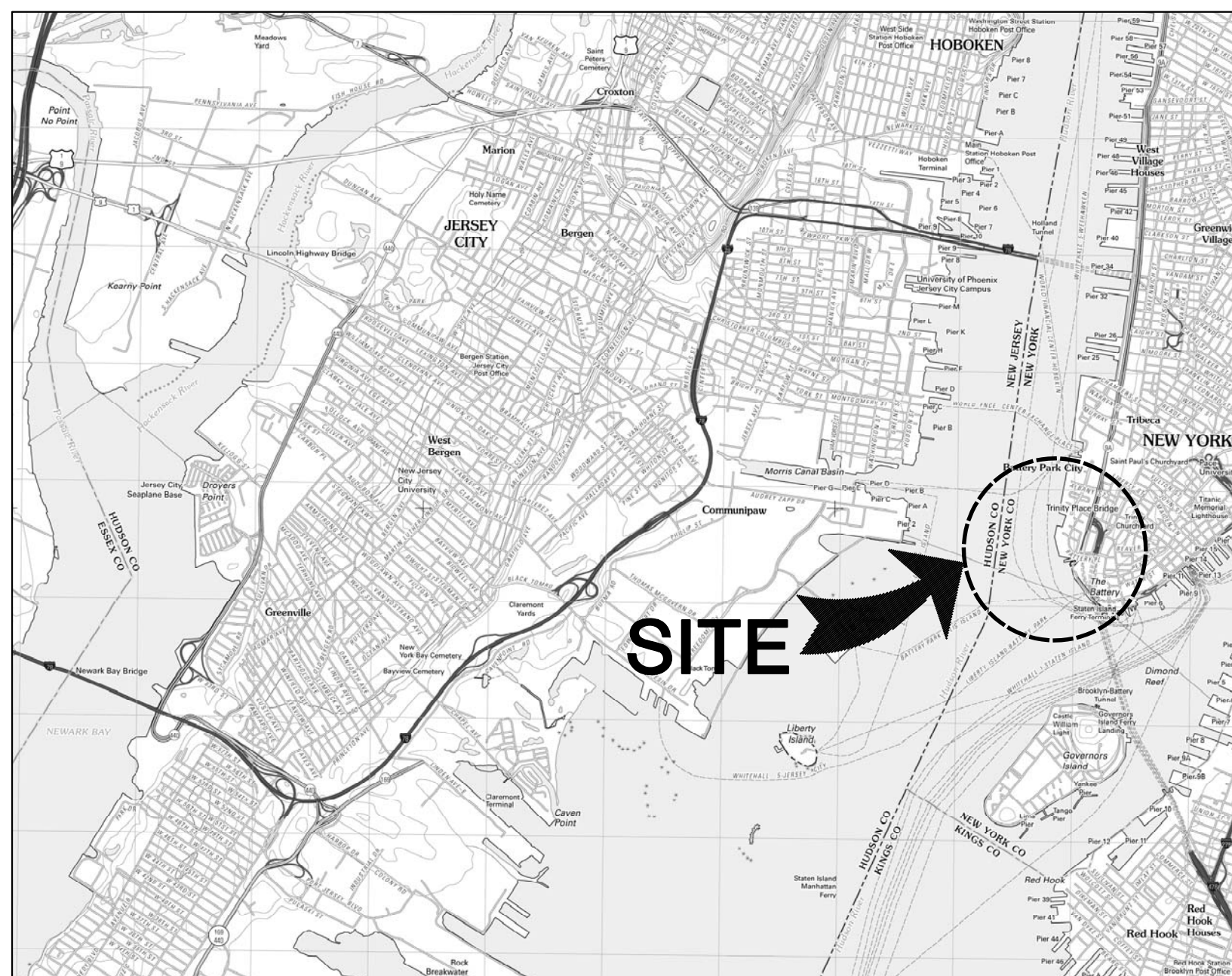
(attached)

BATTERY PARK CITY AUTHORITY

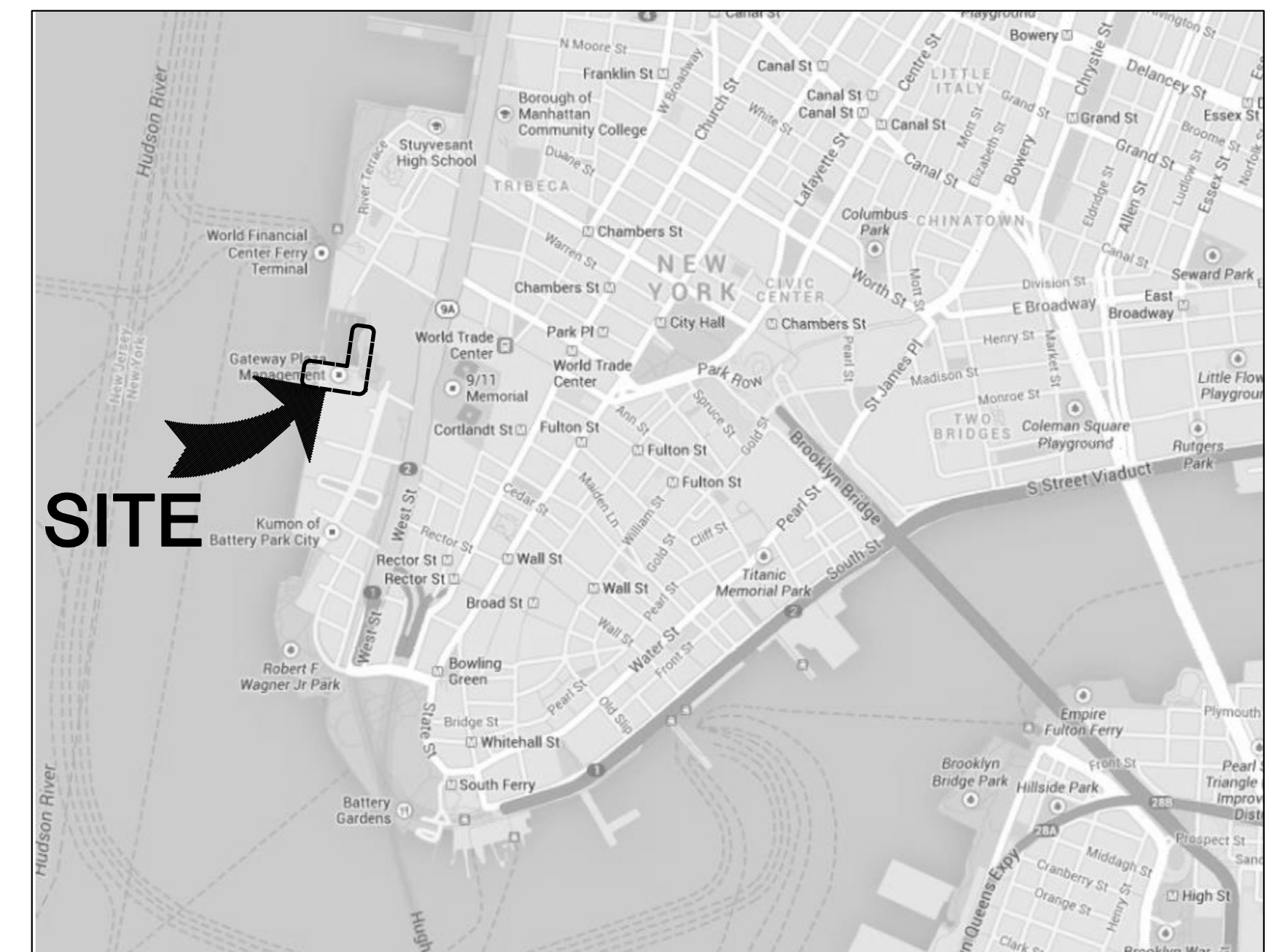
PHASE IV PILE REMEDIATION

BATTERY PARK CITY ESPLANADE
NEW YORK, NEW YORK
APRIL, 2015

PREPARED BY:



LOCATION PLAN



VICINITY MAP

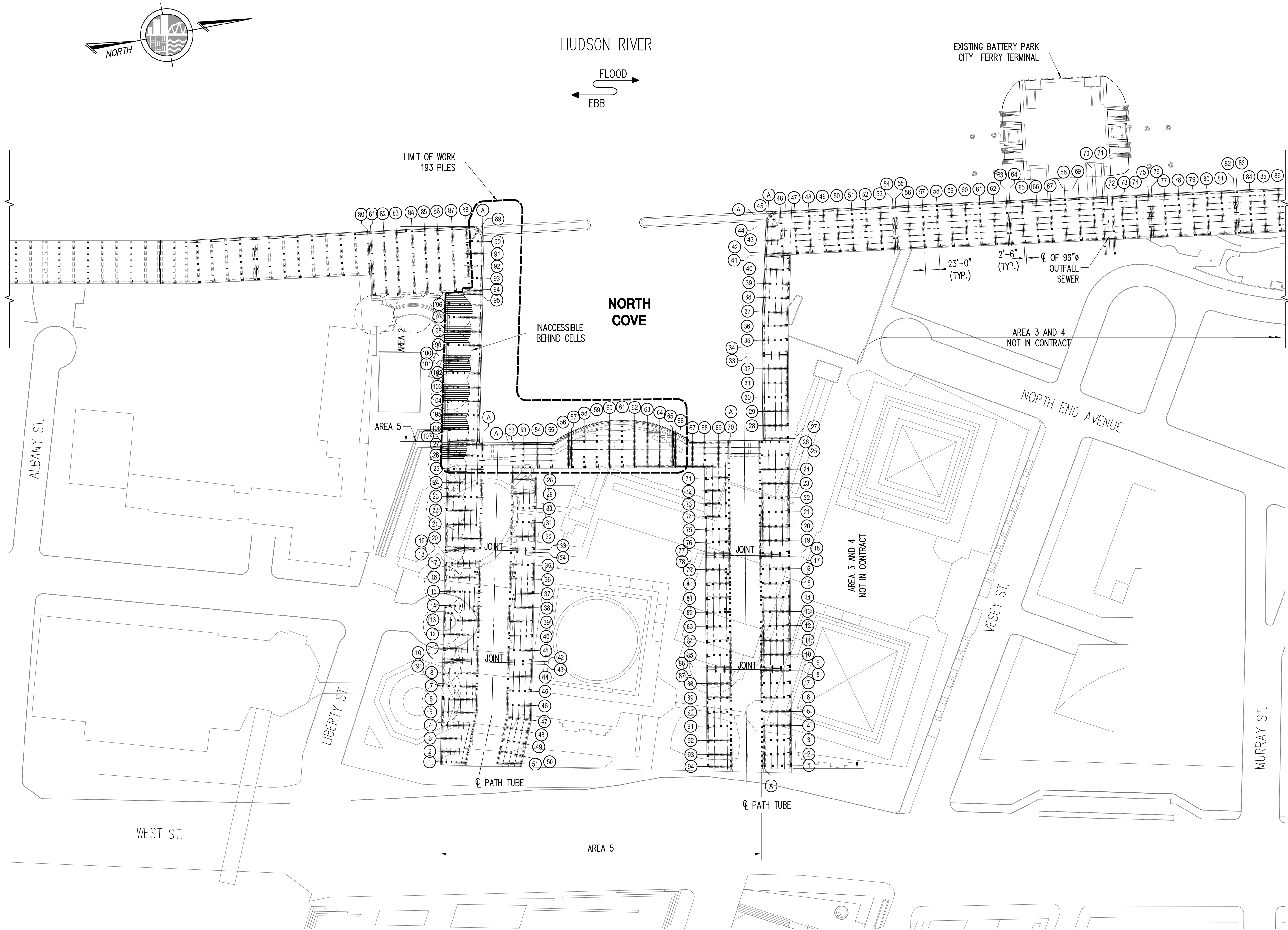
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| <u>DRAWING NO.</u> | <u>SHEET TITLE</u> |
|--------------------|----------------------------|
| S-120 | COVER SHEET |
| S-130 | GENERAL NOTES |
| S-131 | FACILITY PLAN |
| S-132 | PILE REMEDIATION PLAN |
| S-133 | REPAIR PLAN 1 OF 2 |
| S-140 | REPAIR PLAN 2 OF 2 |
| S-150 | ESPLANADE TYPICAL SECTIONS |
| S-151 | PIER TYPICAL DETAILS 1 |
| | PIER TYPICAL DETAILS 2 |

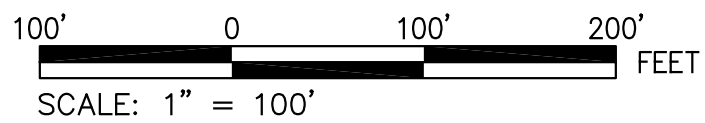
BID DOCUMENTS
NOT FOR CONSTRUCTION

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BID DOCUMENTS
NOT FOR CONSTRUCTION



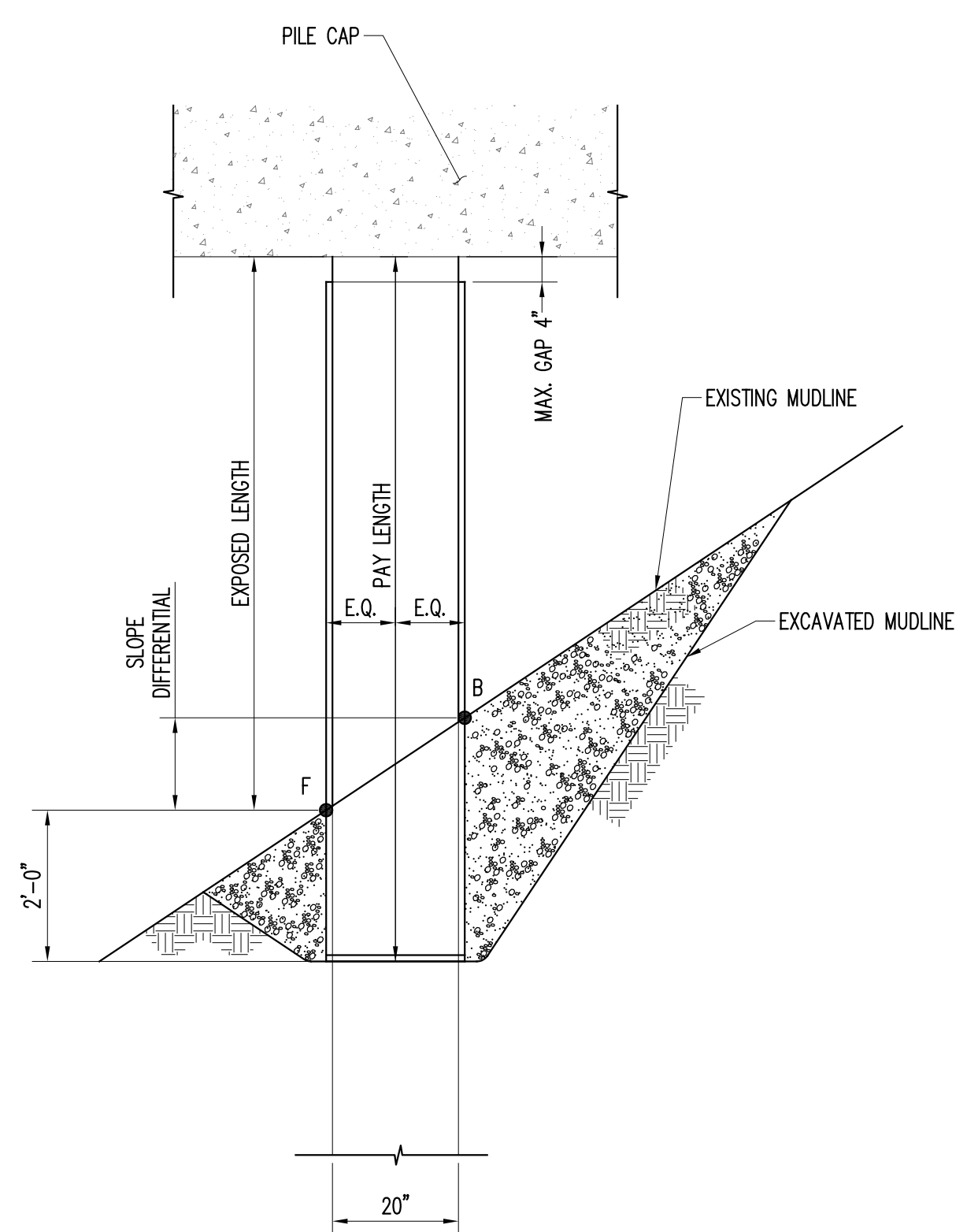
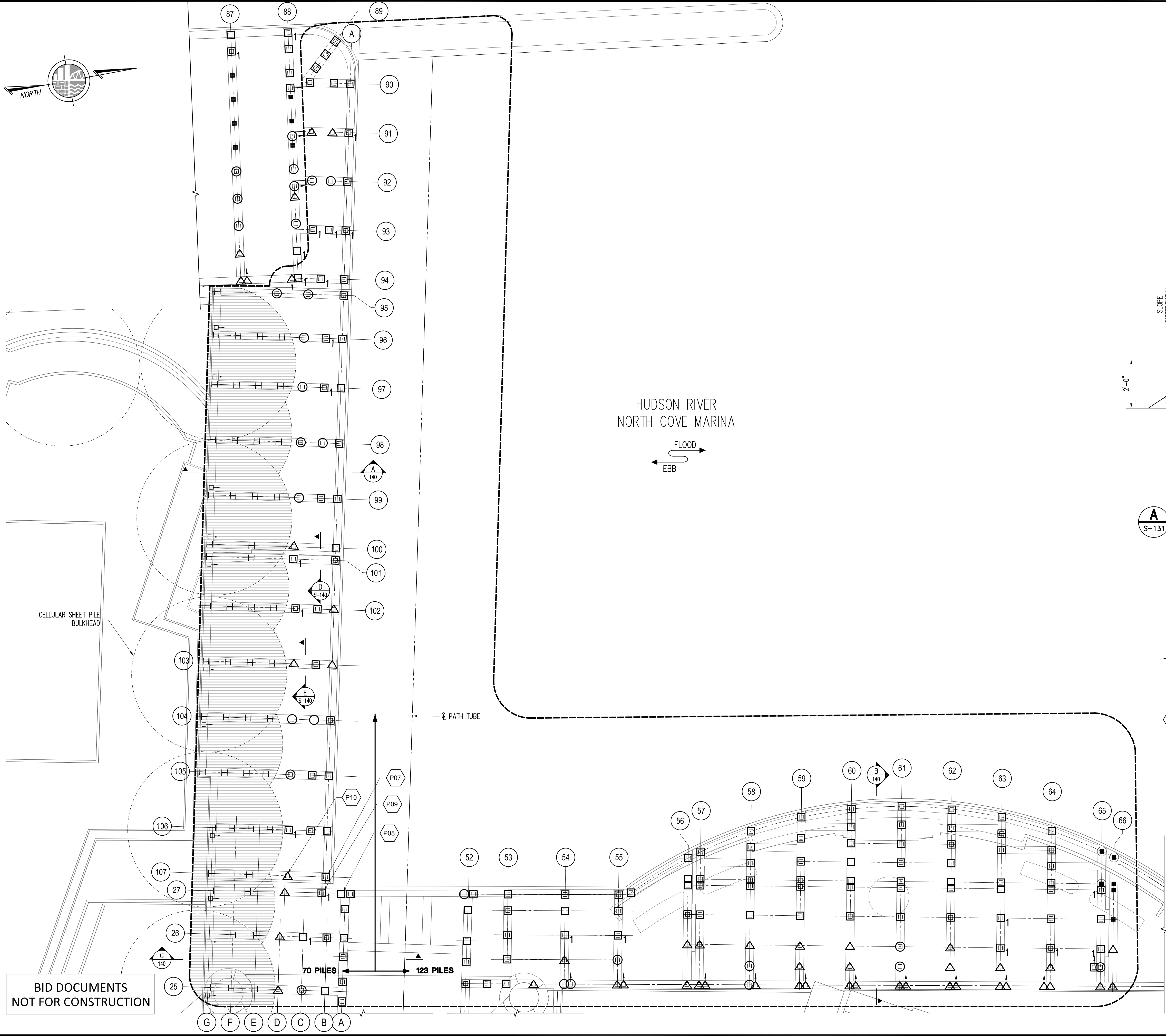
FACILITY PLAN



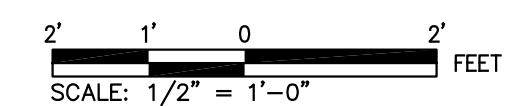
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| | | | |
|--|------|--------|----|
| PROJECT NO. 141037 | | | |
| SCALE AS NOTED | | | |
| DATE 04/20/2015 | | | |
| DRAWN BY EHC | | | |
| CHECKED BY SET | | | |
| DRAWING NO. S-130 | | | |
| 3 OF 9 SHTS | | | |
| PROJECT BATTERY PARK CITY AUTHORITY PHASE II PILE REMEDIATION NEW YORK, NEW YORK | | | |
| McLaren ENGINEERING GROUP applied ingenuity M. G. McLAREN, P.C. 100 Snake Hill Road, West Nyack, NY 10994 T: (945) 353-5400 F: (945) 353-5509 www.mgmclaren.com | | | |
| NO. | DATE | PERSON | BY |

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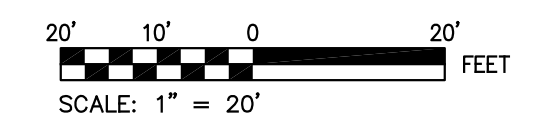
A PAY LENGTH DETAIL
S-131



NOTE:
IF OBSTRUCTION IS HIT AND CAN NEEDS TO BE MODIFIED
(CUT AT AN ANGLE) TO INSTALL, PAY LENGTH WILL BE
LENGTH AT THE MIDDLE OF THE CAN.

- LEGEND:
- 20" x 20" SQUARE PRESTRESSED CONCRETE PILE
 - ◻ 20" x 20" SQUARE PRESTRESSED CONCRETE BATTER PILE
 - H STEEL H-PILE
 - EXISTING JACKET REPAIR
 - ⊙ EXISTING JACKET REPAIR NEEDS ADDITIONAL WORK
 - ⬡ CORE LOCATION TO BE PLUGGED (SEE DETAIL F ON DWG. S-151)
 - A₁ = PROTECTIVE REPAIR W/ SOFT BOTTOM
 - ◻ A₂ = PROTECTIVE REPAIR HARD BOTTOM
 - △ A₃ = PROTECTIVE REPAIR HARD BOTTOM < 2 FT EXCAVATION
 - A₄ = PROTECTIVE REPAIR POSSIBLE OBSTRUCTION
 - F FRONT PROBE
 - B BACK PROBE

PILE REMEDIATION PLAN



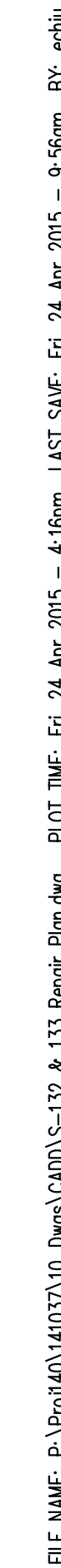
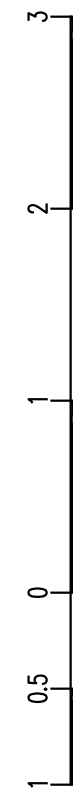
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| PROJECT NO. 141037 | |
| SCALE AS NOTED | |
| DATE 04/20/2015 | |
| DRAWN BY EHC | |
| CHECKED BY SET | |
| DRAWING NO. S-131 | |

McLaren ENGINEERING GROUP
M. G. McLAREN, P.E.
100 Snake Hill Road, West Nyack, NY 10994
T: (947) 353-5400 F: (947) 353-5509 www.mgmclaren.com

BATTERY PARK CITY AUTHORITY
PHASE II PILE REMEDIATION
NEW YORK, NEW YORK

PILE REMEDIATION PLAN

4 OF 9 SHTS



REPAIR PLAN 1 OF 2



- CORE LOCATION TO BE PLUGGED (SEE DETAIL F ON DWG. S-151)

NOTES:

1. MEASUREMENTS BASED ON LIMITED FIELD SURVEY. CONTRACTOR TO VERIFY ACTUAL FIELD CONDITIONS.
2. MINIMUM JACKET LENGTH SHALL CONSIST OF EXPOSED PILE LENGTH + 2 FT MINIMUM EMBEDMENT INTO MUDLINE. SEE DETAIL S-131.

[illegible]

PROJECT
BATTERY PARK CITY AUTHORITY
PHASE **IV** PILE REMEDIATION
NEW YORK, NEW YORK

SHEET TITLE

REPAIR PLAN 1 OF 2

DRAWING NO.

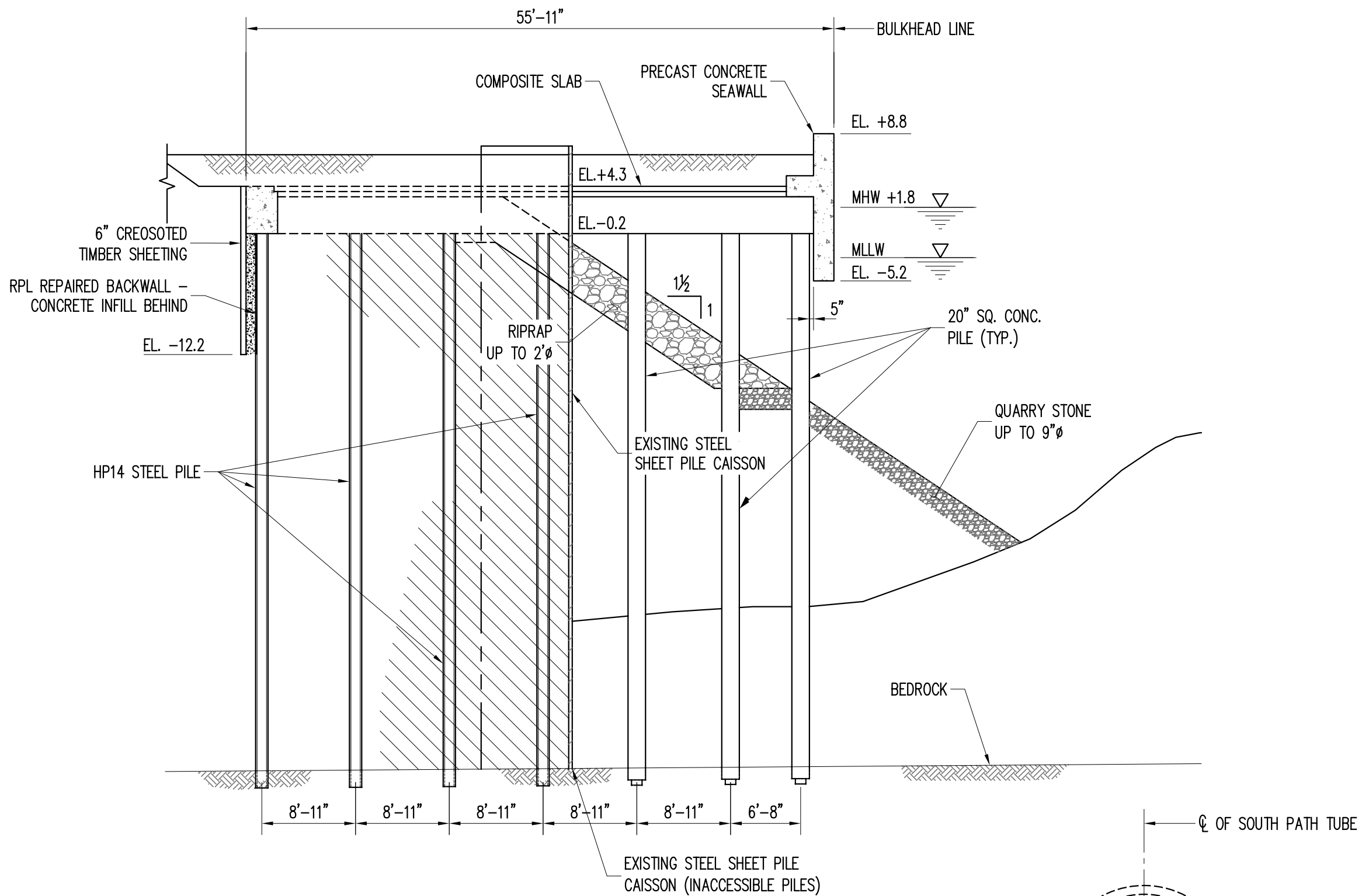
COPYRIGHT © 2015, McLAREN ENGINEERING GROUP



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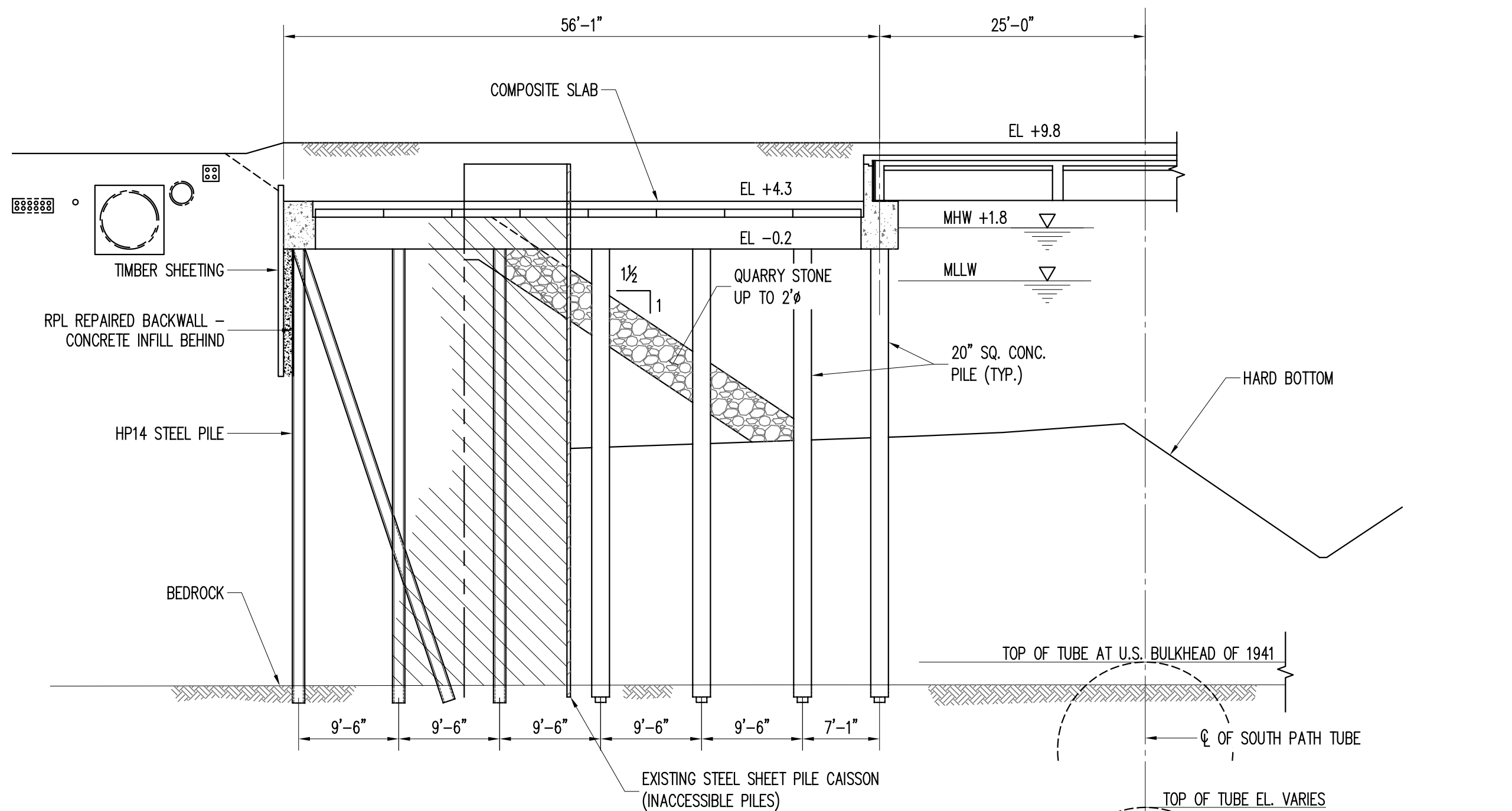
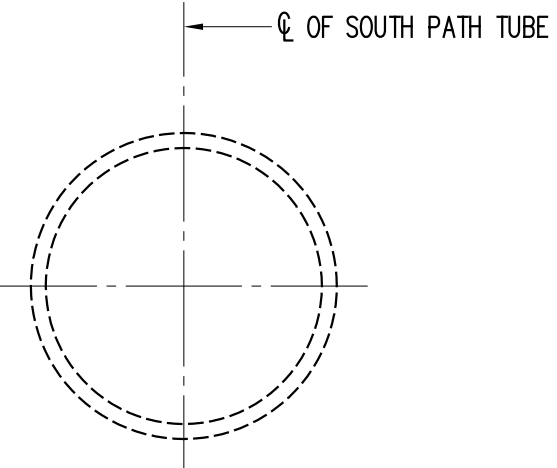
BID DOCUMENTS
NOT FOR CONSTRUCTION

NOTE:
SUBSURFACE PROFILE TAKEN FROM AS-BUILT "BATTERY PARK CITY"
DRAWINGS DEVELOPED BY MUESER, RUTLEDGE, WENTWORTH, AND JOHNSTON
CONSULTING ENGINEERS, DATED JUNE 17, 1974.



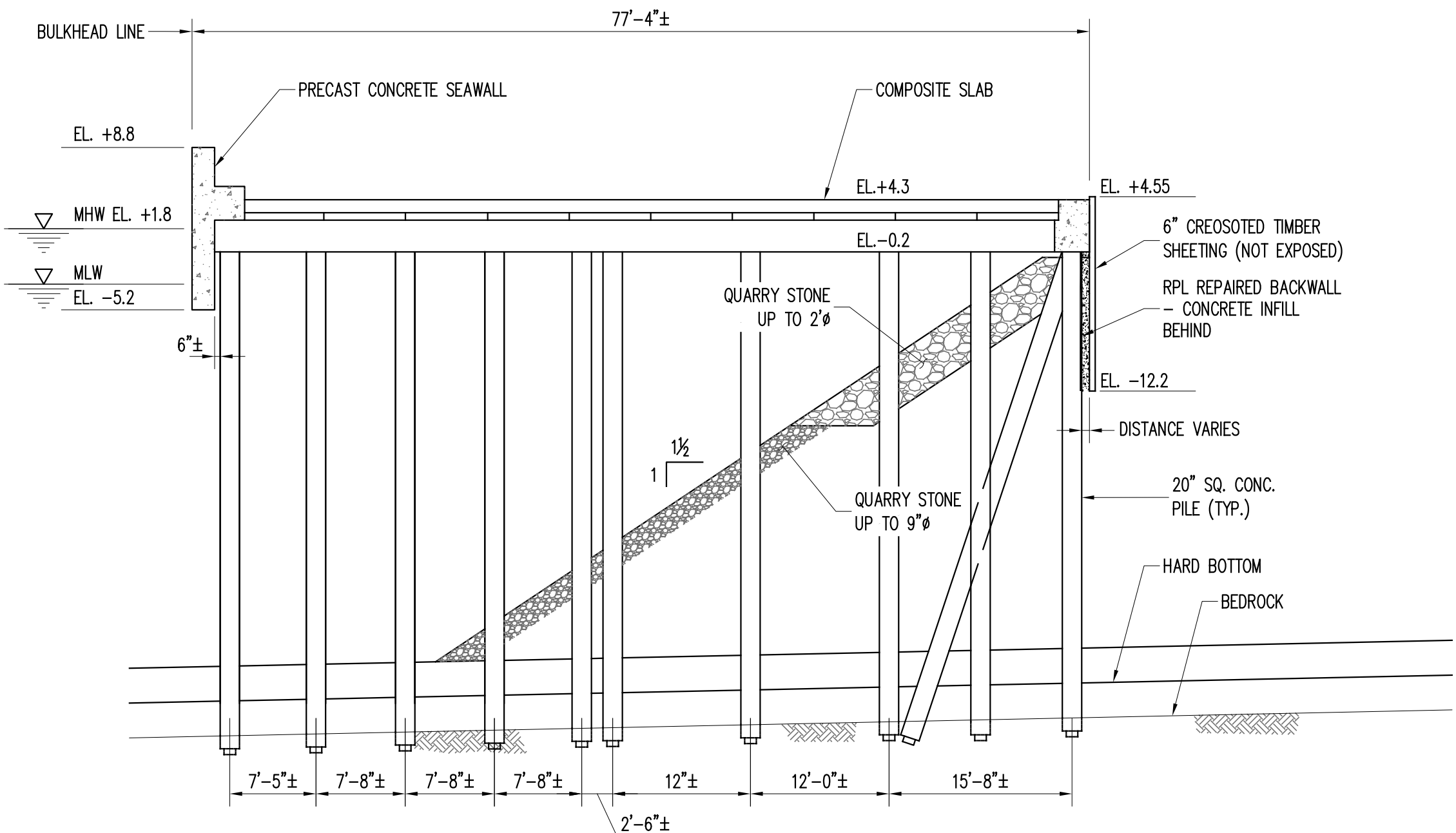
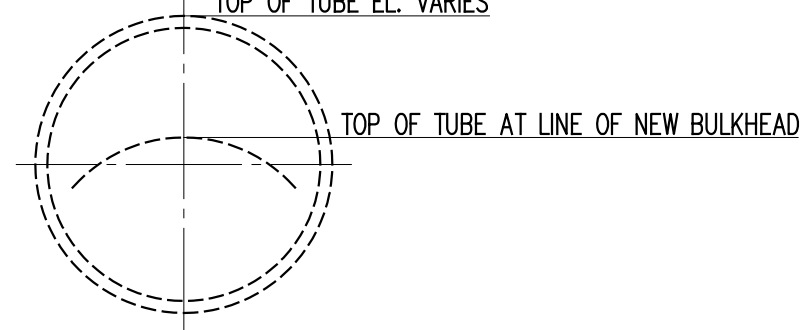
A SECTION
S-140

16' 8' 0 16'
SCALE: 3/32" = 1'-0" FEET



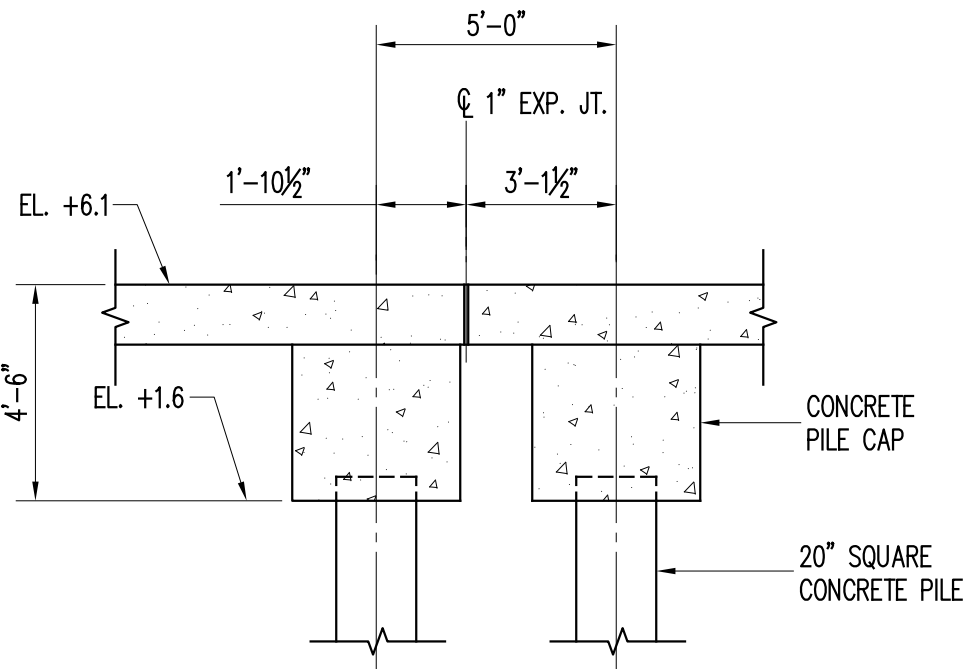
C SECTION
S-140

16' 8' 0 16'
SCALE: 3/32" = 1'-0" FEET



B SECTION
S-140

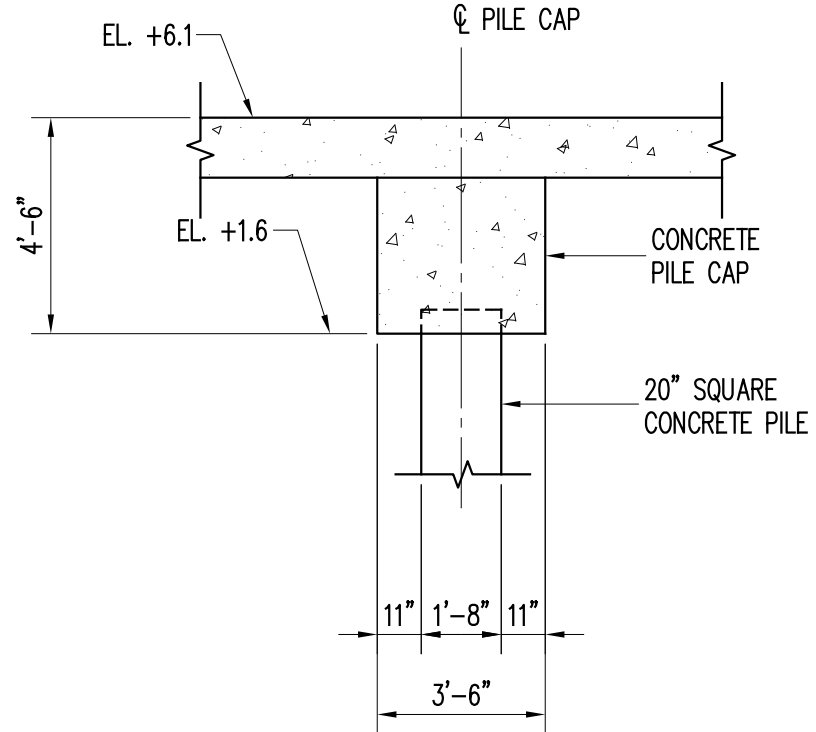
16' 8' 0 16'
SCALE: 3/32" = 1'-0" FEET



EXPANSION JOINT SECTION

D PILE CAP SECTION
S-140

4' 2' 0 4' 8'
SCALE: 1/4" = 1'-0" FEET



E TYPICAL SECTION
S-140

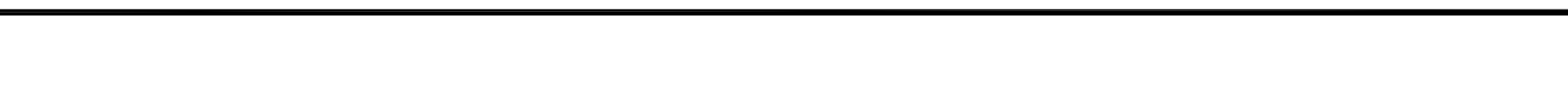
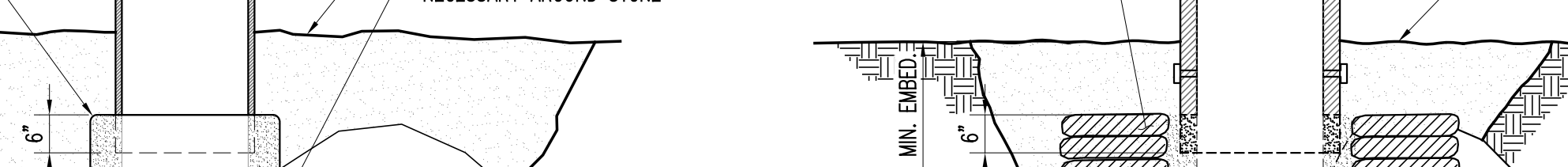
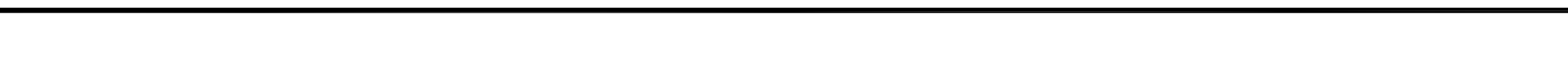
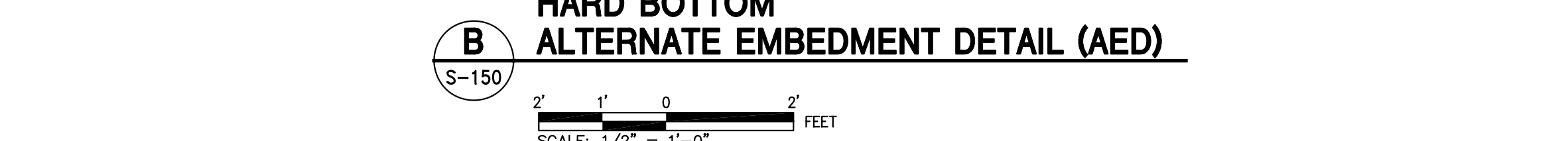
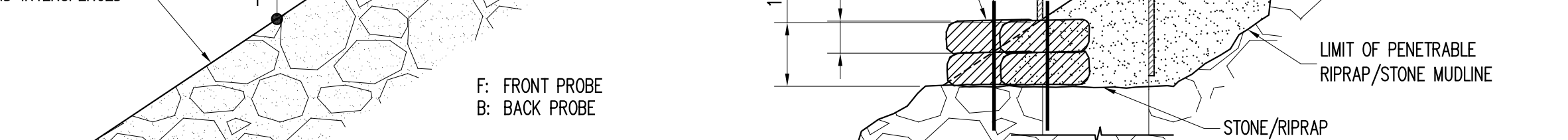
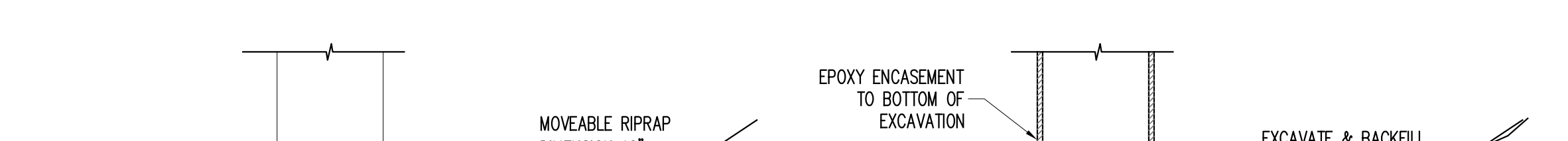
4' 2' 0 4' 8'
SCALE: 1/4" = 1'-0" FEET

| | |
|--------------------|--|
| PROJECT NO. 141037 | |
| SCALE AS NOTED | |
| DATE 04/20/2015 | |
| DRAWN BY EHC | |
| CHECKED BY SET | |
| DRAWING NO. S-140 | |
| 7 OF 9 SHS | |

McLaren
ENGINEERING GROUP
M. G. McLAREN, P.C.
100 Snake Hill Road, West Nyack, NY 10994
T: (947) 353-5400 F: (947) 353-5509 www.mgmclaren.com

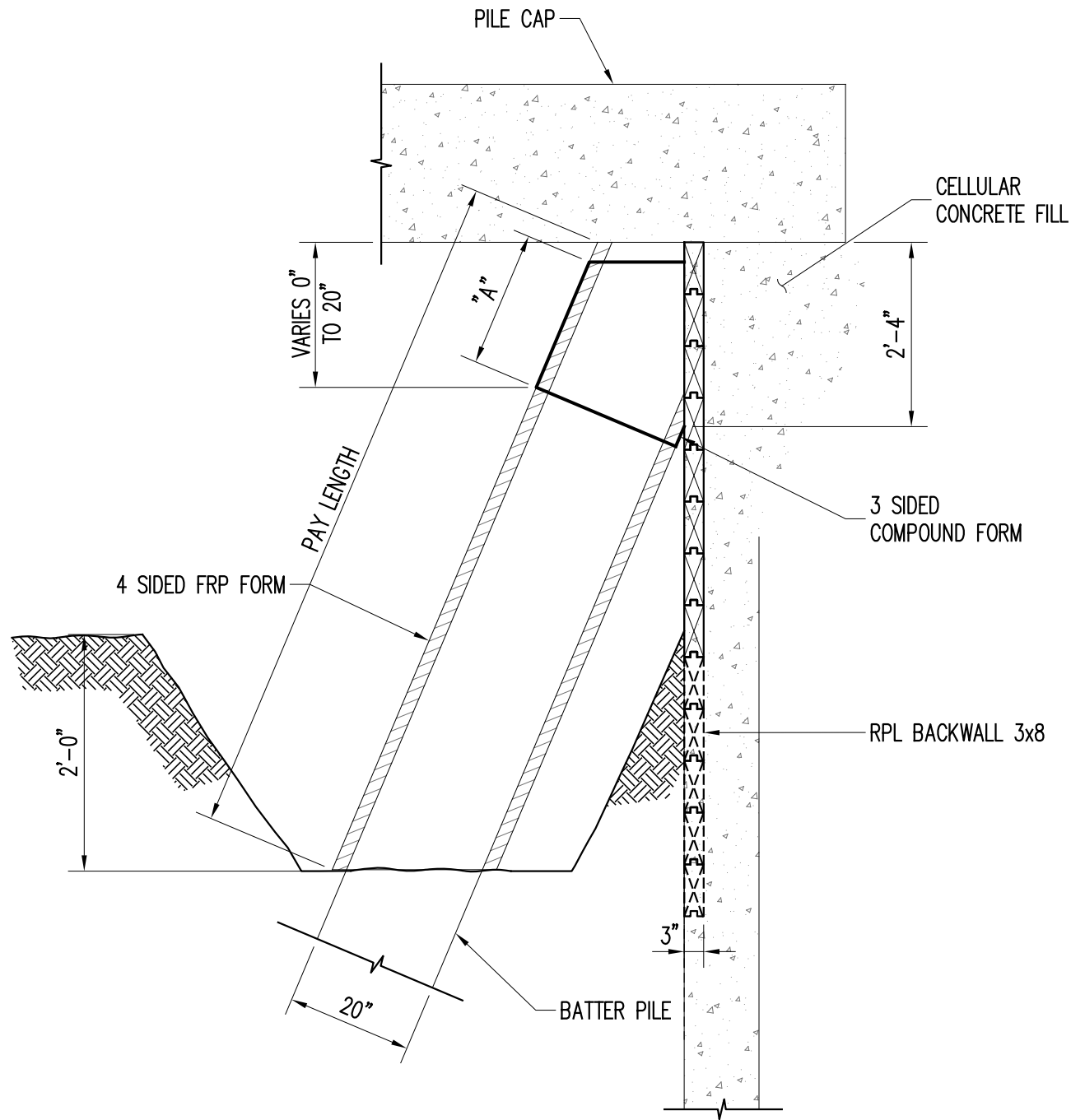
**BATTERY PARK CITY AUTHORITY
PHASE II PILE REMEDIATION**
NEW YORK, NEW YORK

**ESPLANADE
TYPICAL SECTIONS**

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BID DOCUMENTS
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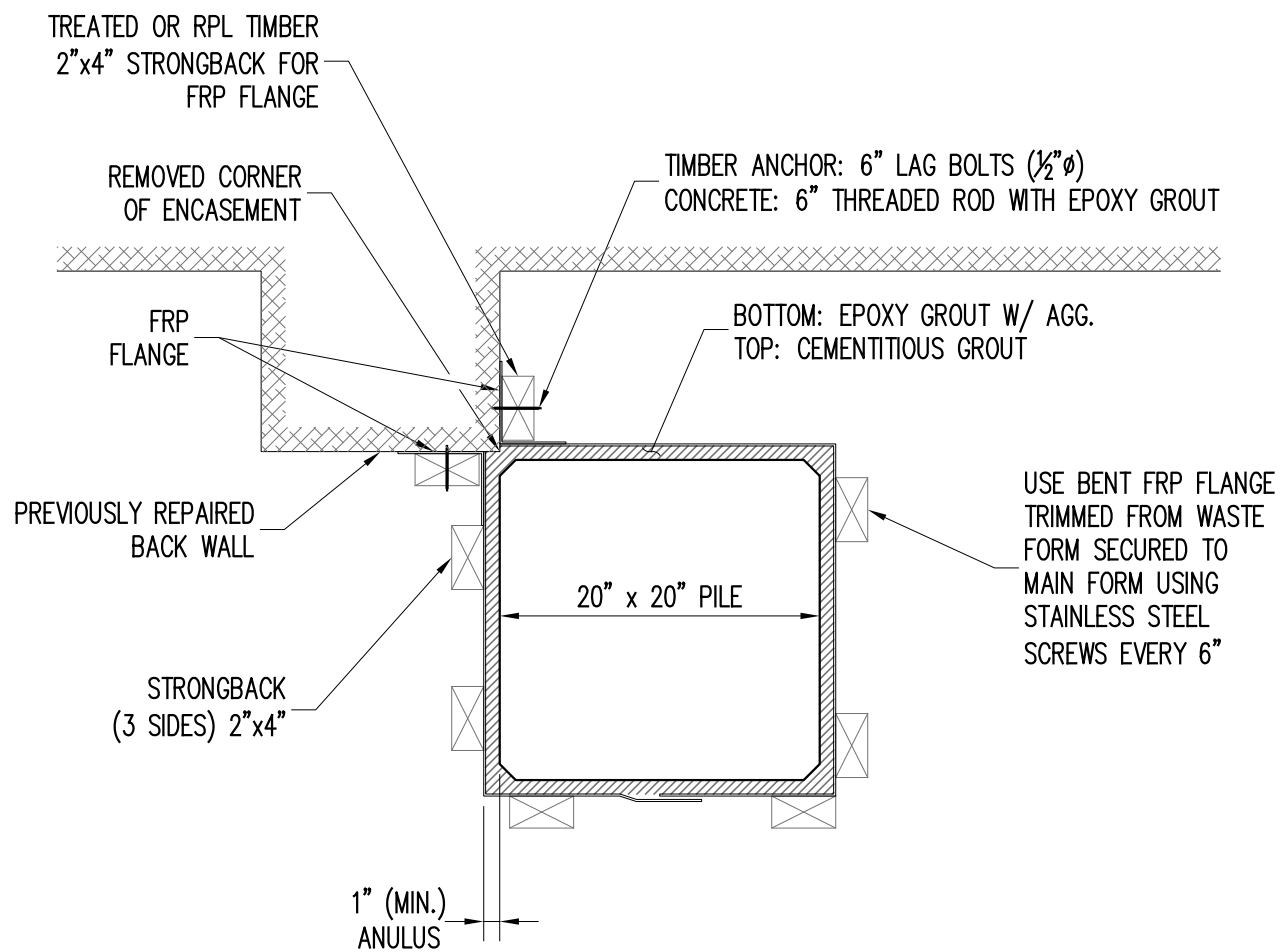


REPAIR TYPE D
D BACKWALL BATTER PILE ENCASEMENT
S-151

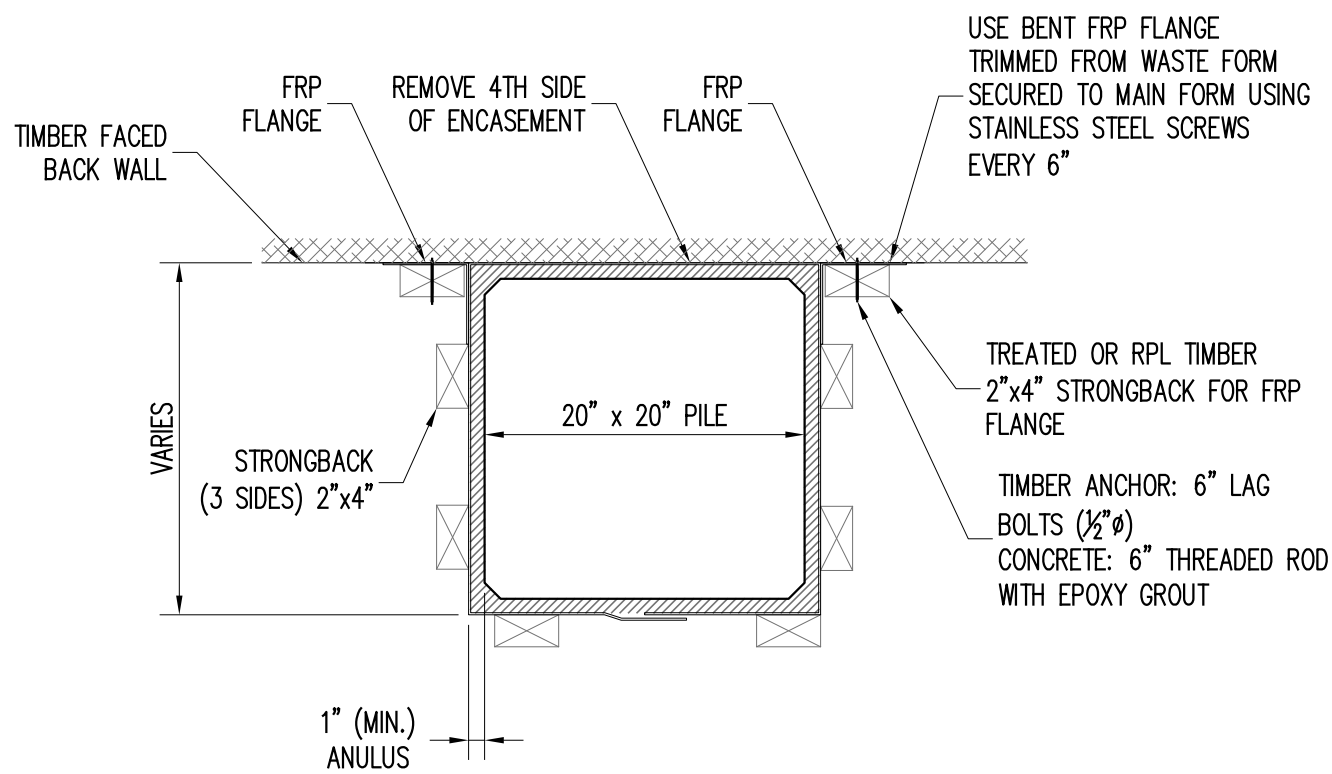
SCALE: 1/2" = 1'-0" FEET

NOTES:

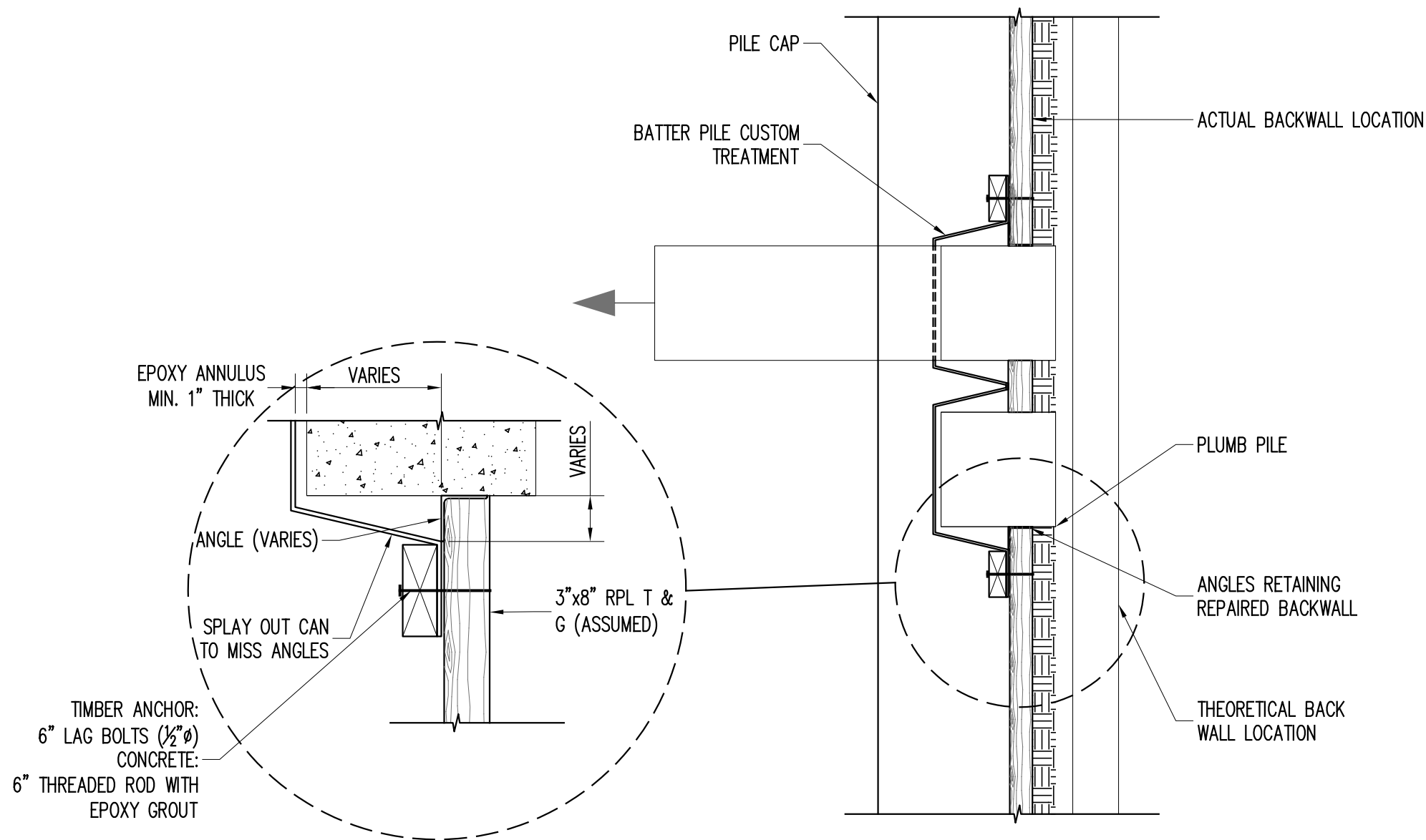
1. IF DIMENSION "A" IS $\leq 8'$ TERMINATE FORM PERPENDICULAR TO PILE AXIS & APPLY SPLASH ZONE COATING ON EXPOSED PILE.
2. IF DIMENSION "A" IS $> 8'$ INSTALL COMPOUND FORM @ TOP & FILL WITH EPOXY GROUT; HAND PACK TOP.
3. MUDLINE CONDITIONS PER SCHEDULE ON REPAIR PLAN.
4. FORMWORK BRACING & STRAPPING TO BE DESIGNED & SUBMITTED BY CONTRACTOR.
5. PILES CAN BE FORMED AND POURED IN (2) LIFTS PROVIDED THAT THE TOP OF THE FIRST POUR IS PRESSURE WASHED CLEAN & THE UNFORMED SECTION OF THE PILE DOES NOT EXCEED THE CLEANING WINDOW.



1 BACK WALL CORNER ENCASEMENT



2 BACK WALL ENCASEMENT



DETAIL

SCALE: 1" = 1'-0" FEET

PARTIAL PLAN

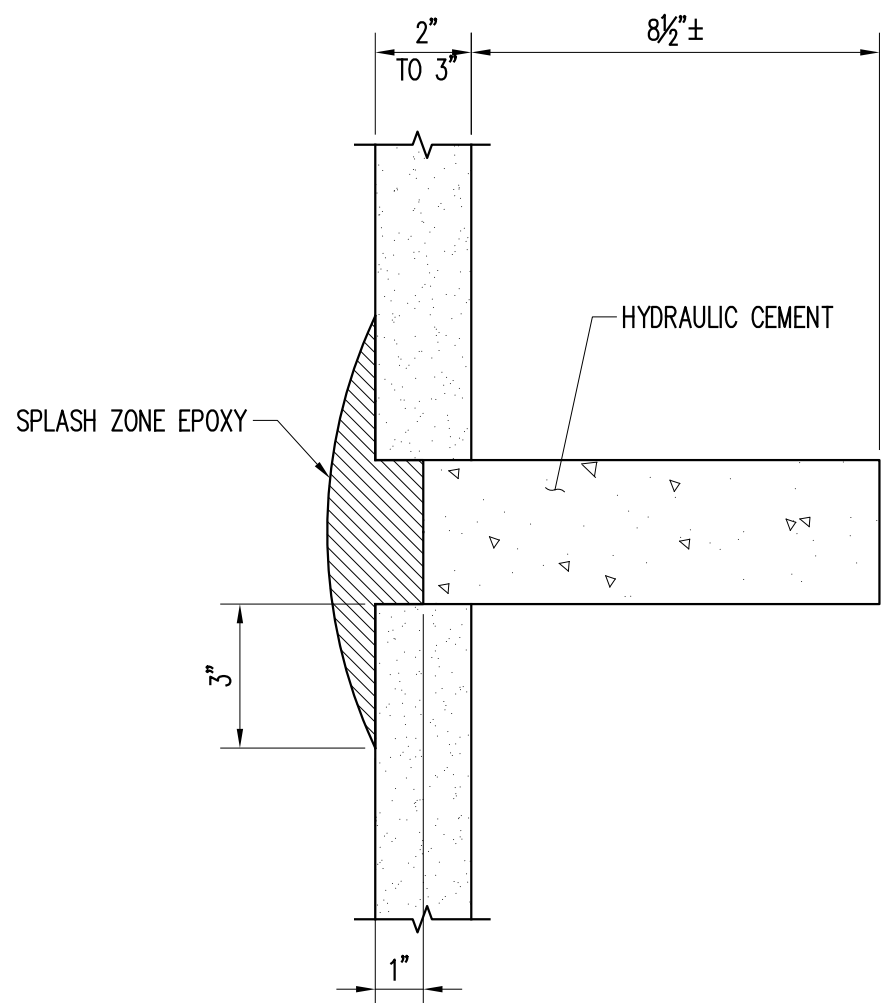
SCALE: 1/2" = 1'-0" FEET

3 BACKWALL INTERFERENCE

E BACK WALL ENCASEMENT REPAIR DETAIL
S-151

SCALE: 1" = 1'-0" FEET

NOTE: FOR PILES IN CLOSE PROXIMITY TO BULKHEAD WALL.



F PLUGS FOR CORE HOLES
S-151

SCALE: 3" = 1'-0" FEET

NOTES:

1. THE SURFACE WITHIN THE CORE AND THE EXTERIOR OF THE PILE WHERE THE SPLASH ZONE EPOXY WILL BE APPLIED MUST BE CLEANED PRIOR TO APPLICATION.
2. PACK AND ROD CORE HOLE WITH NON-SHRINK HYDRAULIC CEMENT TO 1" FROM SURFACE OF PILE.
3. PLUG CORE CORE WHILE HYDRAULIC CEMENT SETS UP TO MAINTAIN VERTICAL FACE.
4. PACK SURFACE WITH SPLASH ZONE FOLLOWING RECOMMENDED CURE TIME.
5. APPLY SPLASH ZONE TO FILL REMAINDER OF HOLE AND EXTEND A MINIMUM OF 3" BEYOND THE EDGE OF CORE HOLE & 1" BEYOND THE FACE OF THE JACKET.

| | |
|--|--|
| PROJECT NO. 141037 | |
| SCALE AS NOTED | |
| DATE 04/20/2015 | |
| DRAWN BY EHC | |
| CHECKED BY SET | |
| DRAWING NO. S-151 | |
| PIER TYPICAL DETAILS 2 | |
| BATTERY PARK CITY AUTHORITY PHASE II PILE REMEDIATION NEW YORK, NEW YORK | |
| PROJECT BATTERY PARK CITY AUTHORITY PHASE II PILE REMEDIATION NEW YORK, NEW YORK | |
| M. G. McLAREN, P.C. 100 Snake Hill Road, West Nyack, NY 10994 T: (947) 353-5400 F: (947) 353-5509 www.mgmclaren.com | |
| McLaren ENGINEERING GROUP applied ingenuity M. G. McLAREN, P.C. 100 Snake Hill Road, West Nyack, NY 10994 T: (947) 353-5400 F: (947) 353-5509 www.mgmclaren.com | |
| BY | |
| DATE | |
| NO. | |
| PERSON | |

Battery Park City Authority
Phase IV Pile Remediation
New York, New York

INDEX OF SPECIFICATIONS

00005 - General Conditions

01110 - Summary of Work

01140 - Work Restrictions

01310 - Project Management and Coordination

01320 - Construction Progress Documentation

01330 - Submittal Procedures

01450 - Quality Assurance

01575 - Temporary Environmental Controls

01700 - Execution Requirements

01710 - Cleaning

01770 - Closeout Procedures

02100 - Site Work General Provisions

02270 - Erosion and Sediment Control

03310 - Concrete Pile Jacketing and Grouting

SECTION 00005

GENERAL CONDITIONS - WATERFRONT WORK

AIA Document A201 – General Conditions of the Contract for Construction shall be referenced if not stated otherwise in Section 00710 or in the Contract Documents.

Notwithstanding anything in these specifications and drawings to the contrary, all provisions in the Battery Park City Authority contract herewith shall supersede any conflicting provisions in these documents. All other provisions of the Contract Documents shall remain in full force and effect. References to the "Authority" in these Conditions shall be deemed to mean "Owner/Owner's Representative" and vice versa.

1.01 INTRODUCTION

- A. If, during the performance of the Work, the Contractor finds a conflict, error, or discrepancy in the Contract Documents, the Contractor shall report to the Construction Manager in writing immediately. Before proceeding with the Work affected thereby, the Contractor shall obtain a written interpretation or clarification from the Owner's Representative which shall be provided within 24 hours of notification from the Owner. Any work done before the Owner's Representative renders his/her decision is at the Contractor's sole risk and may be forced to remove / modify said work at no additional cost to the Owner.
- B. In the event of discrepancies in the Contract Documents, interpretations will be based upon the following priorities, in descending order of precedence:
 - 1. The Scope of Work, as defined in the Request for Proposal.
 - 2. The Agreement including Regulatory Authorizations, and any properly executed Change-Orders thereto.
 - 3. The Drawings and Specifications.
 - 4. AIA Document A201-General Conditions of the Contract for Construction.

The Agreement, the provisions in the Contract and other Contract documents are intended to supplement and complement each other and shall, where possible, be thus interpreted. If, however, any provision of the Agreement irreconcilably conflicts with a provision of the Contract and the other Contract Documents, the provision imposing the greater duty or obligation on the Contractor shall govern. In the event of any dispute over the meaning or application, it shall be interpreted fairly and reasonably and neither more strongly for nor against either party to it.

In case of inconsistency between Drawings and Specifications, or within either document not clarified by Addendum, the better quality or greater quantity of work shall be provided in accordance with the Owner's interpretation.

- C. The Specification covers the rehabilitation of Esplanade Repairs at Battery Park City, Manhattan, NY, also referred to herein as the Project Site and is shown in the Contract Drawings.
- D. The Contractor guarantees that in the performance of work, he and every person in his direct or indirect employment (i.e. subcontractors) shall abide by and comply with all federal, state, and local laws including the Occupational Safety and Health Act and waterfront MARSEC USCG requirements.
- E. The term Owner, as used throughout the Contract Documents, designates Battery Park City Authority (BPCA) as the Owner, or its duly authorized representative.
- F. The term Owner's Representative, as used throughout these Specifications, indicates the Owner's authorized representative for a particular activity. The term includes Construction Manager, Engineer-Of-Record, and/or Special Inspector.
- G. The Construction Manager designates CH2M Hill. It is the responsibility of the Construction Manager to delegate responsibility for particular activities.
- H. The term Engineer-Of-Record or Engineer as used throughout the Contract Documents, designates McLaren Engineering Group (McLaren).
- I. The term Special Inspector, as used throughout the Contract Documents, refers to the party responsible for on-site construction review of the Work to confirm accordance with the Contract Drawings. The Special Inspector is selected by the Construction Manager at the discretion of the Owner.
- J. All correspondence between the Contractor and Engineer of Record and/or Special Inspector shall be directed through the Construction Manager.
- K. The Work shall commence in accordance with the Contractor's accepted schedule.
If, in the opinion of the Owner, the Contractor has not mobilized sufficient plant or material and/or if the Contractor does not demonstrate that sufficient work is underway according to the accepted schedule, the Owner reserves the right to terminate the Contract.
- L. In the event of termination of the Contract pursuant to the conditions set forth herein, such termination shall not act so as to relieve the Contractor from liability for any damages sustained by the Owner as a result of any breach by the Contractor of the terms of the Contract.
- M. At the completion of each work day the area around North Cove must be clear of all construction equipment, materials and debris. The Contractor shall

coordinate with the Construction Manager regarding equipment and material lay down area.

N. Definitions

1. Work: Material, equipment, labor, and services required for Contractor to fulfill his/her obligations of project or the part of the project considered.
2. Project Site: North Cove Marina, 200 Liberty Street, New York, NY 10280.
3. Provide: Furnish and install; provide in place.
4. Furnish: Furnish only, not including installation.
5. Install: Furnish and Install in place materials or structures. (Installation of materials furnished by others will be specifically identified).
6. Shall: Mandatory requirement (understood to be applicable whether or not "shall" is used in the sentence structure): omission of "shall" does not make the Specification or Contract Drawing non-mandatory.
7. Contract Sum: This shall be read as the Total Base Proposal amount and will be adjusted based on actual quantities of completed Work, including Owner-accepted Alternatives and Unit Price as included in the Form of Proposal.
8. Day: Contract "day" shall be as defined in the BPCA master contract.

1.02 DESCRIPTION OF WORK

The Work shall include, but not be limited to:

This Agreement covers the complete scope for the type of work included herein, including all incidental work not necessarily indicated or described in the "scope" documents. This Agreement is let on the basis of such documents with the understanding that the Proposer is to furnish all items required for proper completion of the work without adjustment to the Contract Price. It is intended that the Work be of sound and quality installation and the Proposer shall be solely responsible for the inclusion of adequate amounts to cover installation of all items indicated, described or implied.

- A. Mobilization to and demobilization from the site.
- B. Furnish, installation and maintenance of environmental controls and safety measures.
- C. Furnish, installation and maintenance of temporary works.
- D. Coordination of Work with adjacent vessel traffic and usage of the Project Site by others.
- E. Demolition and authorized disposal of components associated with repairs.
- F. All repairs shown in the Contract Drawings.
- G. Providing coordination with the Construction Manager for securing testing services and test results confirming accordance with Contract Documents for Engineer of Record approval.
- H. Providing submittals.
- I. Attendance of authorized representative at project meetings.
- J. Coordination with Construction Manager and/or Engineer of Record for review of Work.
- K. Providing bi-weekly schedule of anticipated work.
- L. Providing daily construction reports.
- M. Providing detailed outline of Proposer's QA/QC protocol.

1.03 GENERAL SCOPE OF WORK

Schedule

Unless otherwise stated in Section 01330, the following submittal schedule of all shop drawings, etc., for review by the Construction Manager and Engineer of Record shall be as follows:

1. Contractor's Submittal

Certain critical items are to be submitted by the Contractor within time frames listed in these Specifications. Unless specifically noted as such, the Contractor shall be responsible for the timely submittal of all required items,

taking into account the Owner's Representative's review period as outlined herein, in order to maintain satisfactory progress of the Work.

Proposer shall submit within two (2) weeks after receipt of Contract or Notice to Proceed a detailed schedule to the Owner's Representative conforming with the project milestone installation dates.

Contractor shall be responsible to meet all project milestone dates. If the contractor does not meet the milestone dates or is progressing behind schedule, the contractor will be directed by the Owner/Construction Manager to work additional shifts, hours and weekends at no additional cost to the Owner, in order to ensure substantial completion no later than project closeout date. The project milestone dates are as follows:

- a. Construction Start: June 23, 2015
- b. Contractor to complete Shop Drawings: June 30, 2105
- c. Substantial Completion: October 2015
- d. Punch List Walk-through: October 2015
- e. Final Inspection of Punch List: October 31, 2015

Contractor shall be required to submit an original certificate of insurance to the Construction Manager one week prior to commencement of contracted work in accordance with the Owner's contract.

2. Owner's Representative Review and Comments

Within five (5) days after receipt of Contractor's submittal.

The Work shall be performed in a general sequence developed by the Contractor and submitted to the Construction Manager for review, in accordance with the requirements of the Contract. The Contractor is solely responsible for the means and methods of construction and for the sequences and procedures to be used.

The Contractor shall furnish and coordinate all plant, labor, supervision, materials, equipment and appliances for all demolition and/or construction work in connection with the demolition and/or construction of the marine facilities.

The Contractor acknowledges and is aware that the area is occupied by others and that the site will not be fully closed from public access. All material delivery and operations associated with the Work shall be coordinated with other activities at the site in such a manner as to minimize the impedance on the site's tenants and the public, while maximizing the cost effectiveness and time of the Work. Coordination of equipment mobilization, construction, deliveries, etc. must be made with the Construction Manager.

The Contractor is aware of the strong currents and heavy vessel traffic

along the Hudson River and potentially in the North Cove. The Contractor is responsible for securing waterborne equipment at his own risk. Approval from the Construction Manager is required for the location and means of securing such equipment. The Contractor shall provide proper notification to USCG and others as required (i.e. Notice to Mariners).

1.04 EXAMINATION OF EXISTING CONDITIONS

Before submitting a proposal, it is a requirement of this Contract that each proposer visit the site to determine the conditions under which the Work is to be done. Such examination shall include, but not be limited to:

- A. Structural detail of the existing structures and related facilities.
- B. Various on-site utilities and structures not within the Scope of this Contract, but that may impact the execution of the Work. These will remain fully operational throughout the construction period.
- C. The layout and structural condition of the existing structures and water depths.
- D. Access space, possible work areas, and load restrictions.

1.05 LIST OF CONTRACT DRAWINGS

The Contract Drawings which form part of these Specifications are listed in Section 08851.

1.06 PERMITS

The Owner is in the process of securing certain permit amendments and extensions required by federal and state authorities for the proposed activities. Copies of the existing permits are provided as part of the contract documents. Copies of the permit extension applications will be provided to the selected contractor. It is the responsibility of the Contractor to perform the Work in accordance with the terms and conditions of the permits. The Contractor shall post copies of the permits at the site throughout the course of the Work. The Contractor is responsible to obtain all permits associated with the legal disposal of construction debris. The Contractor shall secure all required local authorizations and permits, as well as Notification to Mariners.

1.07 CONTRACTOR-FURNISHED MATERIALS

- A. The Contractor shall furnish all materials for installation in the completed Work as specified hereinafter.
- B. The Contractor shall handle these materials as they are delivered to the site or off-site

work areas, and shall store them in a designated storage area by the Construction Manager. If sufficient room is not available, the Contractor shall store materials at his own cost.

- C. The Contractor-furnished material is subject to review by the Owner or Owner's Representative at the plant of manufacture at the Owner's option. Review by the Owner or Owner's Representative is not to be construed as technical in nature and in no way shall be deemed to relieve the Contractor from his/her obligation herein to insure the quality and integrity of the materials supplied by the Contractor for this project.
- D. Project material furnished by the Contractor shall conform to the requirements of the Specifications stated hereinafter. The Contractor shall, as part of the Contract fee, also furnish all consumable materials necessary to complete the Work, such as, but not limited to, welding electrodes, safety equipment, etc.

1.08 LAYOUT

- A. The Contractor shall be solely responsible for the accuracy of all locations, dimensions, and levels and no plea as to instructions or order received from any other sources other than information contained on Contract Drawings, Specifications or in written orders of the Owner or Construction Manager shall justify departure from the dimensions and elevations required by the Contract Drawings.
- B. The Contractor shall take his own measurements at the site, verifying same with the Contract Drawings and existing facilities, and will be held responsible for the proper fit and alignment of completed work in position.

1.09 GUARANTEE

- A. The Contractor shall guarantee to the Owner all materials and workmanship against original defects, or against injury from proper and usual wear when used for the purpose intended, for twelve (12) months after date of final payment certifications, and shall maintain all items in perfect condition during the period of guarantee.
- B. Defects appearing during the period of guarantee shall be made good by the Contractor at his expense upon written demand of the Owner, it being required that all work shall be in perfect condition when the period of guarantee shall have elapsed. In the event of default by the Contractor, the Company shall have the right to make good any and all defects and bill the Contractor as per the contract for administration fees. The Owner shall provide notice of correction along with time frame for correction prior to taking action regarding guarantee bonds or penalties.

- C. The Proposer shall follow any and all anti-terrorism security procedures, guidelines, instructions, and regulations with respect to ingress into and egress from the work site, transportation and disposition of material that might be considered contraband as well as any emergency procedures. It is the Proposer's responsibility to make contingencies for the effect upon the scheduling and performance of their work of any and all such regulations and procedures. The cost of such contingencies shall be included in the Contract Price.
- D. Access will be granted only through the North Cove Marina. The overall objective will be to perform the work with minimal to no disruption to the daily operation of the esplanade area. See staging plan for allowable areas of access to piles.

1.10 PARKING, STORAGE AND ACCESS TO WORK AREA

- A. The Contractor shall coordinate with the Construction Manager available parking, storage and access to the work area. In no event shall these areas interrupt or disturb the Owner's operations. The Contractor shall protect the stored equipment and material from the elements in such a manner as to be satisfactory to the manufacturer of the equipment or material and the Owner.
- B. Should questions of labor jurisdiction arise, this Proposer will immediately take steps to settle such disputes and will use such labor as may be determined to have jurisdiction, at no additional cost to the Owner. Should it fail to take expeditious action, it will be responsible for any time lost because of delays arising from such disputes.
- C. The Contract includes the cost of all standby trades and Owner Representative fees should Proposer work prior to or later than normal working hours and on Saturdays, Sundays and Holidays, if Proposer desires to work outside of normal working hours. That includes the additional cost for inspections by the engineer.
- D. As a State Agency, Proposer shall be aware, that all BPCA projects require the employment of labor at prevailing wage rates. Outside State and Federal Agencies will closely monitor all projects.
- E. Contractor shall be responsible for providing all equipment required for unloading, installation, clean-up and hauling of debris. Contractor is to be aware that due to the spacing limitations of the surrounding area of work there is to be no staging of equipment on site, unless approved in the Contractor's Staging Plan.
- F. The contractor is responsible for coordination of their work between the Engineer and the Dockmaster. In keeping with the project philosophy of "Zero Impact" on Marina operations, Contractor shall keep the interruption of quay services and access to moored vessels, their crews and passengers to a minimum.
- G. Contractor shall not use the site for staging of construction materials or equipment, unless approved in the Contractor's Staging Plan. The barges shall be subject to the applicable federal, state and local ordinances in addition to the marina regulations.
- H. Proposer shall not store any material or equipment on site unless directed by the Owner/Owner's Representative. The Proposer shall provide storage space for

inspection dive equipment and provide access and material support for the inspection crews.

- I. Proposer shall not use the site for staging of installation materials or equipment except as approved by the Owner.

1.11 SUBCONTRACTORS

- A. A list of Subcontractors, pre-qualified by the Contractor, shall be submitted to the Owner by the Contractor with his proposal. The Owner has the ultimate right to accept or reject any one or more of the subcontractors, and must do so in writing after receipt of said list from the Contractor. No deviations shall be allowed from this list without written approval of the Owner. Valid insurance certificates for subcontractors shall be submitted by the Contractor to the Owner with his proposal.
- B. The Owner shall receive, upon completion of this Contract in full from the Contractor, any reduction in the Subcontractor's price, which may result from a reduced scope of the Contractor's work.

1.12 SITE CONDITIONS

- A. At the Contractor's expense, the Contractor's working areas shall be cleaned by him on a day-to-day basis, with all rubbish removed from the site and all work areas cleaned at the end of each day. At final completion of all work, the Contractor shall leave the entire premises, within the site of his operations, clean and free from the rubbish resulting from his construction operations.
- B. Each Proposer is responsible for progress cleaning of its own areas on a daily basis. All Proposers are responsible for consolidating any debris caused by their work. The proposer for General Construction (G) shall be responsible for cleanup of the entire site which includes removal of debris for ALL proposers on site on a daily basis. The proposer for General Construction (G) shall legally dispose consolidated debris off-site. Each Proposer is advised that failure to comply with cleaning requirements will result in backcharges and /or reductions in payments.
- C. Contractor shall perform site cleanup and removal of debris on a daily basis and broom clean all installation areas at completion of the day. Surplus equipment, parts & installation materials are to be removed by contractor upon completion of installation unless it is mutually agreed, in writing, from Owner or the Construction Manager that this material can remain on site.
- D. Contractor shall be responsible for ice, snow and frost removal at site during construction in order to accommodate performance of work.

- E. The Proposer shall take special care to provide for temporary damage protection for any and all existing conditions to remain in proximity to the work area. The protection shall remain in place while performing the work shown or described herein or elsewhere in the Contract Documents. Any damage to existing conditions to remain as a result of work by the Proposer shall be repaired or replaced to the satisfaction of the Owner and at no cost to the Owner.

1.13 COMPENSATION

- A. Compensation shall be based upon the Owner-accepted Schedule of Values and authorized Change Orders thereto.
- B. Contractor shall provide interim as-built documents in PDF format and a hard copy with each application for payment. These will be incorporated into the final as-built documentation.
- C. Requisitions for this project shall be due to the Construction Manager by the 5th of every month as a "pencil copy". The final signed and sealed requisition is then due to the owner by the 15th of every month in the format specified in the Owner's contract.

1.14 UTILITIES

The Contractor is responsible to provide and maintain any and all utilities he deems necessary to affect the Work. Should existing site utilities be made available for the Contractor's use by the Owner, it is the responsibility of the Proposer to verify the suitability of existing site utilities for their needs. The Contractor may use such provided utilities at his own risk. Damages shall be the sole responsibility of the Contractor and repairs shall be made immediately at no additional cost to the Owner.

1.15 FIRE PROTECTION

The Contractor shall provide and maintain at his expense all required fire protection systems and devices as necessary to safely perform the Work in accord with the applicable regulations. They shall be operational throughout the period of construction. The Contractor shall also maintain sufficient means for fire and emergency rescue vehicles to access the site.

1.16 COMPLIANCE WITH CONTRACT

The Owner shall have the right to withhold without penalty any payment described above, or sections referenced herein, for completed work should the Contractor fail to meet any obligations or requirements of the Contract, cause damage to the existing site, structures or facilities, or violate a condition of the Permits. Any withheld payment shall be promptly made upon the Contractor's full compliance with the Contract, or resolution of impending fines or damage claims.

1.17 ENVIRONMENTAL PROTECTION

The Contractor shall comply with all local, state, and federal requirements for protection of:

- A. The environment during the Work. No later than fifteen (15) days following award of contract and at least ten (10) days prior to mobilization to the site, Contractor shall submit a comprehensive plan describing the means and methods to be employed for protection, containment, and clean up. Contractor shall ensure that personnel are properly trained and that sufficient equipment and materials are readily available for use if required. Contractor shall abide by state and federal spill-reporting requirements. Clean-up required as a result of Contractor negligence shall be the sole responsibility of the Contractor at no additional cost to the Owner.
- B. During execution of the Work, the Contractor is required to install and maintain any and all required sedimentation and erosion control measures to protect adjacent waterways, streets, and properties. Measures include but are not limited to temporary berms, hay bales, silt fences, containment booms, and turbidity curtains. In accordance with the NYSDEC, NYCDEP and local regulations. Temporary materials and equipment shall conform to requirements for Temporary Work.
- C. The work by the Contractor shall conform to the applicable section of the New York City Noise Code regarding the sound level standards and the time and duration of construction activities.

1.18 TEMPORARY WORK

Labor, equipment, materials, and services required to perform the Work that, upon completion, are not a part of the Work, shall be furnished, installed, and subsequently removed from the site by the Contractor.

1.19 SAFETY PLAN

No later than ten (10) days following award of Contract and at least ten (10) days prior to mobilization to the site, Contractor shall submit two (2) copies of his project-specific Safety Plan by the Owner.

1.20 MATERIAL SAFETY DATA SHEETS

No later than ten (10) days following award of contract and at least ten (10) days prior to mobilization to the site, Contractor shall submit two (2) three-ring bound sets of all Material Safety Data Sheets (MSDS) for materials anticipated for use in execution of the Work. As the Work progresses and new materials are used on the project, Contractor shall submit two (2) copies of the corresponding MSDS's for these new materials no later than the time of arrival of the materials on site. ALL MSDS sheets regarding materials used in the execution of the Work shall be up-to-date and stored in the Contractor's onsite job trailer or office.

1.21 WORK SCHEDULE REQUIREMENTS

Access to the site and acceptable working hours are limited between 0700 and 1730 unless approved otherwise by the Owner. Work shall be in compliance with local noise restriction ordinances. It is understood that Work hours may need adjustment in order to accommodate tidal cycles at the North Cove; which will remain in operation during the course of construction.

1.22 ENGINEERING SERVICES CHARGEABLE TO THE CONTRACTOR

The Owner reserves the right to charge the Contractor for additional engineering and inspection services if required including, but not limited to, Contractor's actions or inactions, delays, quality assurance failures, re-work, etc.

1.23 CONTRACTOR'S REPRESENTATIVE

The Contractor shall assign an individual to be the single point of contact for all job-related correspondence and issues. This individual shall be assigned to the project from start to finish, and shall not be replaced without permission from the Owner whose permission should not be unreasonably withheld. This individual shall be responsible to disseminate information to other members of the Contractor's staff and to applicable subcontractors as necessary. This individual shall be the Contractor's designated representative at the site, and shall be authorized to conclude all matters, financial and otherwise, on the Contractor's behalf. The Contractor's Representative shall attend all project meetings and shall be on site at all times while the Contractor or his Subcontractors are present on site.

1.24 MEANS AND METHODS

The structures have been designed to be self-supporting and stable after construction is complete. The stability of the structures prior to completion is solely the responsibility of the

Contractor. This responsibility extends to related aspects of the construction activity including, but not limited to, erection methods, erection sequence, connections, temporary bracing, forms, shoring, use of equipment, and similar construction procedures. Review of construction by the Engineer of Record is for general conformance with the Contract Documents only. Lack of comment by the Owner and Owner's Representative with regard to construction procedures shall not be interpreted as approval or acceptance of any such procedures.

1.25 PRECEDENCE

It is expressly understood and agreed that failure by the Owner or Owner's Representative to exercise his authority or prerogative to order the Contractor for any duly authorized purpose shall not be considered to set a precedent for any other activities.

1.26 SAFETY OF PERSONS AND PROPERTY

The Contractor is solely responsible for the safety of his operations. The Contractor shall take precautions for the safety of, and shall provide protection to prevent damage, injury or loss to:

- A. Persons employed by the Contractor in performance of the Work, and persons nearby that may be affected by the Contractor's operations or the Work;
- B. The Work, including all equipment and materials which will be incorporated in the Work;
- C. Other properties and structures at the site, or on adjacent properties.

1.27 UNCOVERING WORK

The Contractor shall notify the Construction Manager prior to covering any Work. The Contractor shall not proceed to cover the Work until formal approval from the Construction Manager is provided in writing. If any Work is covered prior to acceptance by the Owner or Construction Manager, the Work shall, if requested by the Owner, be uncovered for the Owner's observation and then be re-covered at the Contractor's sole cost and expense.

1.28 DAILY CONSTRUCTION REPORTS

For each day that Work is performed at the site, the Contractor shall prepare and submit a Daily Construction Report to the Construction Manager. Contractor shall include the following information in the report, as a minimum:

- A. Project name
- B. Contractor name
- C. Date

- D. Hours worked
- E. Weather conditions
- F. Subcontractors working on site
- G. Material deliveries (material, quantity, and vendor)
- H. Trades working on site (trade and number of workers per trade)
- I. Equipment on site (manufacturer and model number, with notation of whether the equipment was idle or was used in the Work)
- J. Specific work performed, location and type of work
- K. Visitors to the site
- L. Materials or equipment leaving the site (including debris removal)
- M. Incident descriptions
- N. Weekly tidal predictions
- O. Contractor shall submit reports no later than 12:00 hours for the previous day's work.

1.29 MONITORING OF EXISTING STRUCTURES DURING CONSTRUCTION

The Owner reserves the right to establish an independent monitoring program in order to evaluate the effect of the Work on the existing structures to remain on site. Such monitoring may include, but is not necessarily limited to, settlement gauges, tilt plates, and crack gauges.

The Owner reserves the right to suspend the Contractor's operations at any time based upon the monitoring data.

1.30 EXCAVATED MATERIAL

Contractor shall leave excavated material a safe distance from the base of the pile where the excavation was performed. Upon completion of the repair, Contractor shall backfill the excavation with the excavated material.

1.31 ENGINEERING REVIEW AND SPECIAL INSPECTION

At key stages throughout the Work, engineering inspections are required to ensure the Work is being performed in accordance with the Contract Documents. These inspections will be performed by a Special Inspector, as selected by the Construction Manager at the discretion of the Owner. The final acceptance of the Work will be performed by the Engineer of Record. The key stages are specific to each repair type and are listed in the table below. The items listed may not be all inclusive. Additional pre and post inspection criteria may be required at the discretion of the Special Inspector, Engineer of Record or Construction Manager.

1.32 EQUIPMENT

Proposers shall use ultra-low sulfur diesel fuel or compressed natural gas (CNG) for all construction vehicles with a carrying capacity in excess of 5 tons and for all portable generators, consistent with Local Law 77 for Lower Manhattan. All diesel engines of greater than 50 horsepower must use ultra-low sulfur diesel fuel with a sulfur content no greater than 15 ppm. Equip the above vehicles with high performance engines and diesel oxidation catalyst (DOC) filters or another previously demonstrated advanced retrofit technology, consistent with NYC Local Law 77 for Lower Manhattan. On-road vehicles used in construction may not idle for more than five consecutive minutes except under practical considerations such as during vehicle maintenance, while stopped in traffic, and in cold weather conditions below 25 degrees F.

END OF SECTION

SECTION 01110
SUMMARY OF WORK
PART I - GENERAL

1.01 WORK COVERED BY CONTRACT DOCUMENTS

Please see Exhibit A

1.02 EXAMINATION OF DOCUMENTS AND SITE OF WORK

The Proposer acknowledges the following:

- A. The Proposer has reviewed and examined the Proposal Documents to the degree which he is satisfied that the Proposal submitted includes the cost to perform the Work as set forth in the proposed Contract Documents.
- B. The Proposer has informed himself of the existing conditions and limitations under which the Work is to be performed and that the Proposal submitted includes the cost to account for these existing conditions and limitations.
- C. The Proposer acknowledges that the substructure and subsurface condition information provided with the Proposal Documents is for information only.
- D. The Proposer is permitted to perform his own investigation solely for purposes of development of a Proposal. Any site investigation that the Proposer performs, including subsurface, hydrographic, above or below water, or any other non-destructive or destructive testing, shall be documented by the Proposer at the time of the investigation. Results of any investigation performed by the Proposer, which is not representative in the Proposal Documents, and which impact the Proposal, shall be submitted with the Proposal. This information shall be kept confidential during the Contractor selection process.
- E. Proposers are permitted to perform investigations at the site by appointment prior to submitting a proposal. Appointment requests shall be in writing and shall be made through the Owner's Representative at least seventy-two hours prior to the intended time of visit. The Proposer shall provide all required insurance and forms to the Owner's Representative and receive authorization prior to performing any investigation.

1.03 PROOF OF COMPETENCY OF PROPOSER

A proposer may be required to furnish evidence satisfactory to the Owner that he and his proposed subcontractors have sufficient means and experience in the types of work called for to assure completion of the Contract in a satisfactory manner. Such evidence includes representative project information, similar to the scope and magnitude of this project, consisting of references, contract value, and other pertinent information.

1.04 EXECUTION OF AGREEMENT

- A. Certificates of Insurance shall be approved by the Owner before the successful Proposer may proceed with the Work. Failure or refusal to provide Certificates of Insurance in a form satisfactory to the Owner shall subject the successful Proposer to loss of time from the allowable construction period equal to the time of delay in furnishing the required material.
- B. Certificates of Insurance shall name at a minimum, the Owner, Owner's Representative and Consulting Engineer as additional insured parties.

1.05 INTERPRETATION OF CONTRACT DOCUMENTS PRIOR TO PROPOSING

- A. If any person contemplating submitting a Proposal for construction of the Work is in doubt as to the true meaning of any part of the proposed Contract Documents, or finds discrepancies in or omissions from any part of the proposed Contract Documents, he must submit to the Owner's Representative, with copy to the Owner, a written request for interpretation thereof by not later than seven (7) days prior to the Proposal due date. The person submitting the request shall be responsible for its prompt delivery.
- B. Interpretation or correction of Contract Documents will be made only by Addendum and will be mailed or delivered to each Proposer of Record. The Owner and Owner's Representative will not be responsible for any other explanations or interpretations of the Contract Documents.

1.06 PRE-PROPOSAL CONFERENCE AND JOB SITE WALKTHROUGH

A Pre-Proposal Conference will be held at the site for the purpose of considering questions posed by Proposers and for the purpose of holding a walkthrough of the project site.

Proposers are expected to provide written confirmation of attendance to the Owner's Representative at least two (2) days prior to the Pre-Proposal Conference.

Clarifications, corrections, and changes, made as a result of the Pre-Proposal Conference, shall be made by Addendum only. The Proposer shall not construe statements made during the Pre-Proposal Conference, by the Owner, the Owner's Representative (Engineer), as a change of terms or conditions of the Proposal Documents.

1.07 CONSTRUCTION TIME

The Contractor shall commence and perform the Work expeditiously in accordance with the Contractor's construction schedule with adequate, trained forces and shall achieve

substantial completion and final completion within the times stated within the schedule.

Within the Form of Proposal, provide the total number of days which the Proposer proposes to complete the Work. The schedule is to commence with issuance of the Owner's Executed Contract on or about June 23, 2015, and be 100 percent completed, including all final inspections, by October 31, 2015.

1.08 BASE BID

Base Bid provided shall be complete, including all mark-up, and shall include all appropriate overheads, profit, and cost of labor, materials, equipment, required permits to perform the Work and costs associated with services necessary to complete the substructure rehabilitation work in accordance with the Contract Documents.

For Work to be performed on a unit price based on linear footage, or as specifically directed by the Owner, the estimated quantities are not guaranteed and are solely for the purpose of comparison of proposals and determining an initial Contract price.

Payment for unit price work shall be based upon the total quantity completed and accepted by the Owner and as described below:

- A. The lump sum price for the **Mobilization/Demobilization** shall consist of obtaining all required permits; preparatory work and operations necessary for the movement of personnel, equipment, supplies, and incidentals to the project site; preparation of a construction schedule; furnishing and erecting field offices, laboratory, batch plants, and other facilities necessary for work on the project; badging and training of flaggers, escorts, gate guards and other employees as specified herein; and all other work which must be performed or cost incurred prior to beginning work on the various contract items at the project site. Mobilization shall include the following principal items:
1. Permits for this project, including DSBS, After Hours Permits, and BPCPC Access Permits.
 2. The schedule of costs breakdown of the Bid.
 3. The Contractor's approved Baseline Construction Schedule.
 4. Contractor's Operation and Storage Yard (Staging Area), including the complete installation of all field offices with utilities, fencing and gates, and supplies.
 5. Installation of floating plants and pump stations, with all appurtenances necessary for fully functional facilities of adequate combined capacity to meet project production needs.
 6. Moving onto the Site all equipment and materials required for the first thirty (30) days of construction.
 7. Submittals of Shop and Coordination Drawings and Job Mixes for the first thirty (30) days of construction.
 8. Posting all required OSHA notices and establishing on-site safety programs.

9. Demobilization shall include removal of construction facilities, including all utilities, and equipment off the Site and final cleanup of the Site after completion of the Project.
- B. The lump sum price for **General Conditions** shall consist of the following principal items:
1. Project management and project supervision including the following:
 - a. Superintendent(s)
 - b. Safety Manager
 - c. CPM Scheduler
 - d. Quality Assurance / Quality Control
 - e. Project Manager(s)
 - f. Project Executive
 - g. Field Office Engineer
 - h. Field Office Support Staff
 - i. Project Expeditor
 - j. Assistant Superintendent(s)
 2. Insurance
 3. Profit
 4. Front Office Overhead
 5. Safety and Environmental Controls/Protection Site Conditions:
 - a. Temporary Power Consumption (Offices)
 - b. Temporary Power Consumption (General Site Use)
 - c. Temporary Water and Sewer Consumption
 - d. Temporary Water Hookup, Distribution & Meters
 - e. Temporary Electrical Hookup, Distribution & Meters
 - f. Temporary Fire Protection
 - g. Temporary Heating & Cooling
 - h. Temporary Fencing
 - i. SWPPP Measures
 - j. Temporary Entries and Truck Washes
 - k. Street Cleaning (by G.C.)
 - l. Traffic Control Measures
 - m. Traffic Control Maintenance
 - n. Temporary Barricades & Signage
 - o. Temporary Lighting
 - p. Temporary Partitions & Covered Floor Openings
 - q. Temporary Toilets/Sanitary Measures
 - r. Temporary Laydown (prep and restoration)
 - s. Security System/Watchman (contractor's option)
 - t. Pre-construction Photo Documentation
 - u. Progress Photos
 - v. Temporary Protection (in-place work/adjacent structures)

- C. The Lump Sum price for the **Performance and Payment Bonds** shall consist of obtaining all required bonds including execution and acceptance by the Owner.
- D. The Unit Price for the **Protective Pile Encasements** will be based on a unit cost per linear foot of repair. The unit price shall include costs associated with all details provided in the Contract Drawings for this repair. The cost shall include, but is not limited to:
1. Removal of all debris on or attached to the pile, removing any floating dock chains, cleaning the piles to remove marine growth/fouling, sediment buildup, loose concrete over the full excavated height of the exposed pile, and anything else that will interfere with the installation of an FRP form. Remove all loose and deteriorated concrete located within the extents of the repair.
 2. Design and Installation of FRP stay-in-place formwork over the full height of the 4-sided repair including all standoffs, bottom seals, T&G form seals, pump ports, and other appurtenances/requirements in the Contract Documents
 3. Filling forms by injection of an approved underwater epoxy grout, per the Specifications, to the top of the forms as required. The top is to be hand packed with an approved epoxy or epoxy grout that can be sloped to approximately 2:1 so as to prevent ponding of water atop repair. The forms should have a plug installed at the bottom and allowed to cure before the remainder of the pile is filled. Lifts of epoxy are allowable provided each meets the conditions in the Contract Documents.
 4. Remove all temporary items including but not limited to all ratchet straps, forms, strongbacks, banding, exterior ports etc... The FRP forms are to remain in place.
- E. The Unit Price for the **Backwall Batter Pile Encasement** will be based on a unit cost per linear foot of repair. The unit price shall include costs associated with all details provided in the Contract Drawings for this repair. Specifically, the FRP cutoff wall repairs (existing) intersect the batter piles such that forming the top of the pile may not be possible. The cost shall include, but is not limited to:
1. Removal of all debris on or attached to the pile, cleaning the piles and cleaning of the backwall where the batter pile encasement will intersect; to remove marine fouling/growth, sediment buildup, obstructions on the back wall including bolts, spikes, loose timber, loose concrete over the full excavated height of the exposed pile, and anything else that will interfere with the installation of an FRP form.
 2. Design and Installation of FRP stay-in-place formwork over the full clear height of the 4-sided repair including all standoffs, bottom seals, T&G form seals, pump ports, and other appurtenances/requirements in the Contract Documents.

3. Filling forms by injection of an approved underwater epoxy grout, per the Specifications, to the top of the forms as required. If the exposed height of the pile remaining is less than 8 inches, the top, the pile is to be encased by hand in a marine epoxy paste or splashzone epoxy. If it is greater than 8 inches, a compound form will have to be installed and filled in a second lift. The forms should have a plug installed at the bottom and allowed to cure before the remainder of the pile is filled. Lifts of epoxy are allowable provided each meets the conditions in the Contract Documents.
 4. Remove all temporary items including but not limited to all ratchet straps, forms, strongbacks, banding, exterior ports etc... The FRP forms are to remain in place.
- F. The Unit Price for the **Backwall Three Side Encasement** will be based on a unit cost per linear foot of repair. The unit price shall include costs associated with all details provided in the Contract Drawings for this repair. Specifically, the FRP cutoff wall repairs (existing) intersect the plumb piles such that a three sided form will be required. The cost shall include, but is not limited to:
1. Removal of all debris on or attached to the pile, cleaning the piles and cleaning of the back wall where the pile encasement will intersect; to remove marine fouling/growth, sediment buildup, obstructions on the back wall including bolts, spikes, loose timber, loose concrete over the full excavated height of the exposed pile, and anything else that will interfere with the installation of an FRP form.
 2. Design and Installation of FRP stay-in-place formwork over the full clear height of the 3-sided repair including all standoffs, bottom seals, T&G form seals, attachments to the back wall, pump ports, and other appurtenances/requirements in the Contract Documents. In some instances, the back wall may be formed by angles attached to the concrete pile. The 3-sided form should be opened up to avoid the angles and attached to the back wall.
 3. Filling forms by injection of an approved underwater epoxy grout, per the Specifications, to the top of the forms as required. The forms should have a plug installed at the bottom and allowed to cure before the remainder of the pile is filled. Lifts of epoxy are allowable provided each meets the conditions in the Contract Documents.
 4. Remove all temporary items including but not limited to all ratchet straps, forms, strongbacks, banding, exterior ports etc... The FRP forms and the connections to the back wall are to remain in place.
- G. The Unit Price for the **Backwall Corner Encasement** will be based on a unit cost per linear foot of repair. The unit price shall include costs associated with all details provided in the Contract Drawings for this repair. Specifically, the FRP cutoff wall repairs (existing) or other features intersect the plumb piles such that a three sided form will be required. The cost shall include, but is not limited to:
1. Removal of all debris on or attached to the pile, cleaning the piles and cleaning

of the backwall where the pile encasement will intersect; to remove marine fouling/growth, sediment buildup, obstructions on the back wall including bolts, spikes, loose timber, loose concrete over the full excavated height of the exposed pile, and anything else that will interfere with the installation of an FRP form.

2. Design and Installation of FRP stay-in-place formwork over the full clear height of the 4-sided repair including all standoffs, bottom seals, T&G form seals, attachments to the back wall, pump ports, and other appurtenances/requirements in the Contract Documents.
 3. Filling forms by injection of an approved underwater epoxy grout, per the Specifications, to the top of the forms as required. The forms should have a plug installed at the bottom and allowed to cure before the remainder of the pile is filled. Lifts of epoxy are allowable provided each meets the conditions in the Contract Documents.
 4. Remove all temporary items including but not limited to all ratchet straps, forms, strongbacks, banding, exterior ports etc... The FRP forms and the connections to the back wall are to remain in place.
- H. The Unit Price for the **Excavation and Backfill – Soft Bottom** will be based on a unit cost per pile. A soft mudline is defined as materials that can be removed by hand easily including sand, clay, silt, mud, gravel, pea stone, and any other aggregates smaller than 4 inches in diameter (approx. 6 lbs). The unit price shall include costs associated with all details provided in the Contract Drawings for this excavation and backfill. The cost shall include, but is not limited to:
1. Removal of all debris on or around the pile at the mudline, including anything connected to the pile at the mudline. Chains for the floating docks shall be relocated to an adjacent pile.
 2. Excavation of the mudline, sand or other soft materials to the deeper of:
 - a. Two (2) feet below the current mudline or riprap line, or,
 - b. To a point at which stone is encountered and it is unsafe to remove more riprap due to OSHA slope stability or size of stone exceeds 4 inches in diameter, or,
 - c. A large obstruction prevents further excavation in a specific area.
 - d. Items (a), (b) and (c) are to be verified at Hold Point #1 by the Owner's representative.
 3. Stability of the excavation for diver safety.
 4. Retaining materials for backfill after the pile protective encasement is finished
 5. Backfill the pile completely to ensure that there is 2 ft of the pile embedded in the mudline. Use the existing materials removed and retained for the backfill.
 6. Backfill of a pile with a documented obstruction under this item will be paid for under "Riprap Obstruction Detail" in Line Item L below.

- I. The Unit Price for the **Excavation and Backfill – Hard bottom** will be based on a unit cost per pile. A hard mudline is defined as materials that cannot be removed by hand easily including aggregates from 4 inches up to 12 inches in diameter (max 165 lbs). A pile will be classified as having a hard mudline if there is more than 1 ft of hard materials in the excavation. The unit price shall include costs associated with all details provided in the Contract Drawings for this excavation and backfill. The cost shall include, but is not limited to:
1. Removal of all debris on or around the pile at the mudline, including anything connected to the pile at the mudline. Chains for the floating docks shall be relocated to an adjacent pile.
 2. Excavation to the deeper of:
 - a. Two (2) feet below the current mudline or riprap line, or,
 - b. To a point at which stone is encountered and it is unsafe to remove more riprap due to OSHA slope stability or size of stone exceeds 12 inches in diameter, or,
 - c. A large obstruction prevents further excavation in a specific area.
 - d. Items (a), (b) and (c) are to be verified at Hold Point #1 by the Owner's representative.
 3. Stability of the excavation for diver safety.
 4. Retaining materials for backfill after the pile protective encasement is finished.
 5. Backfill the pile completely to ensure that there is 2 ft of the pile embedded in the mudline. Use the existing materials removed and retained for the backfill.
 6. Backfill of a pile with a documented obstruction under this item will be paid for under "Riprap Obstruction Detail" in Line Item L below.
- J. The Unit Price for the **Excavation and Backfill – Hard bottom <2ft** will be based on a unit cost per pile. A hard mudline is defined as materials that cannot be removed by hand easily including aggregates from 4 inches up to 12 inches in diameter (max 165 lbs). A pile will be classified as having a hard mudline if there is more than 1 ft of hard materials in the excavation. Specifically in this instance, excavation of a hard mudline does not reach 2 ft. The unit price shall include costs associated with all details provided in the Contract Drawings for this excavation and backfill. The cost shall include, but is not limited to:
1. Removal of all debris on or around the pile at the mudline, including anything connected to the pile at the mudline. Chains for the floating docks shall be relocated to an adjacent pile.
 2. Excavation to a point at which stone is encountered and it is unsafe to remove more riprap due to OSHA slope stability or size of stone exceeds 12 inches in diameter, or large obstruction prevents further excavation in a specific area which will be verified by the owner's representative.
 3. Stability of the excavation for diver safety.
 4. Retaining materials for backfill after the pile protective encasement is finished.

5. Backfill of the pile under this item will be paid for under "Alternate Embedment Detail" in Line Item K below.
- K. The Unit Price for the **Alternate Embedment Detail (AED)** will be based on a unit cost per pile. The unit price shall include costs associated with all details provided in the Contract Drawings for this repair detail. The cost shall include, but is not limited to:
1. Removal of all loose stone and materials on or around the pile at the excavation limits and levelling out the limits as much as possible.
 2. After the epoxy FRP form is installed and pumped full (Item A above), installing grout bags around the base of the pile with anchor spikes as detailed in the Contract Drawings.
 3. Pumping an underwater epoxy grout annulus around the base of the pile.
 4. Backfilling the remainder of the pile completely to ensure that there is 2 ft of the pile embedded in the mudline on the opposite side of the AED. Use the existing materials removed and retained for the backfill.
 5. It is acceptable for the contractor to install the FRP form, then the grout bags, and then pump the annulus of the bags and the plug of the pile concurrently.
- L. The Unit Price for the **Riprap Obstruction Detail (ROD)** will be based on a unit cost per pile. The unit price shall include costs associated with all details provided in the Contract Drawings for this repair detail. The cost shall include, but is not limited to:
1. Removal of all loose stone and materials on or around the pile at the excavation limits and levelling out the limits as much as possible.
 2. After the epoxy FRP form is installed and pumped full (Item A above), installing grout bags or custom formwork around the base of the pile and the obstruction as per the with anchor spikes as detailed in the Contract Drawings.
 3. Pumping an underwater epoxy grout annulus in the form or in the grout bag annulus around the base of the pile.
 4. Backfilling the remainder of the pile completely to ensure that there is 2 ft of the pile embedded in the mudline on all sides. Use the existing materials removed and retained for the backfill.
 5. It is acceptable for the contractor to install the FRP form, then the grout bags/obstruction form, and then pump the annulus of the bags and the plug of the pile concurrently.
- M. The Unit Price for the **Sand Bags** will be based on a unit cost per sandbag placement on an "Excavation - Soft Bottom". The unit price shall include costs associated with all details provided in the Contract Drawings for when there is not enough natural material to backfill an excavated pile to the minimum 2 ft of embedment. The cost shall include, but is not limited to:

1. Backfilling to the greatest extent possible, using the natural and existing materials around the pile without compromising the embedment of the adjacent pile repairs.
 2. Stacking sandbags around the base of the pile over the backfill so that the entire pile has an embedment of at least 2.5 ft in materials. The bags shall be placed such that a minimum of voids are present.
 3. Alternately, pea gravel can be used to backfill provided that the pile maintains a 2 ft embedment below the mudline.
- N. The Unit Price for the **Grout Bags** will be based on a unit cost per grout bag placement on an "Excavation - Hard Bottom". The unit price shall include costs associated with all details provided in the Contract Drawings for when there is not enough natural material to backfill an excavated pile to the minimum 2 ft of embedment. The cost shall include, but is not limited to:
1. Backfilling to the greatest extent possible, using the natural and existing materials around the pile without compromising the embedment of the adjacent pile repairs.
 2. Stacking grout bags around the base of the pile over the backfill so that the entire pile has an embedment of at least 2.5 ft in materials. The bags shall be placed such that a minimum of voids are present.
 3. Alternately, pea gravel can be used to backfill provided that the pile maintains a 2 ft embedment below the mudline.
- O. The Unit Price for the **Concrete Core Plug** will be based on a unit cost per plug installed on existing piles per the Contract Documents.
- P. The Unit Price for the **Extended Pile Encasement** will be based on a unit cost per linear foot of repair. The unit cost shall include costs associated with all details provided in the Contract Drawings for this type of repair. The cost shall include but is not limited to:
1. Removal of existing hollow portion of can to three (3) inches above sound cementitious grout, if total length from top of existing form to bottom of pile cap is less than eight (8) inches hand pack with approved epoxy or epoxy grout that can be sloped to approximately 2:1 so as to prevent ponding of water atop repair. Pressure wash top of cementitious grout, fill any voids with pourable epoxy grout and allow to cure before placement of new can.
 2. Removal of all debris on or attached to area of pile where form was hollow, cleaning the piles to remove marine growth/fouling, sediment buildup, loose concrete over height of new encasement, and anything else that will interfere with the installation of an FRP form. Remove all loose and deteriorated concrete located within the extents of the repair.

3. Design and Installation of FRP stay-in-place formwork over the full height of the 4-sided repair including all standoffs, bottom seals, T&G form seals, pump ports, and other appurtenances/requirements in the Contract Documents.
4. Filling forms by injection of an approved underwater epoxy grout, per the Specifications, to the top of the forms as required. The top is to be hand packed with an approved epoxy or epoxy grout that can be sloped to approximately 2:1 so as to prevent ponding of water atop repair. The forms should have a plug installed at the bottom and allowed to cure before the remainder of the pile is filled. Lifts of epoxy are allowable provided each meets the conditions in the Contract Documents.
5. Remove all temporary items including but not limited to all ratchet straps, forms, strongbacks, banding, exterior ports etc. The FRP forms are to remain in place.

Q. The Unit Price for the **Deduct – BPCA Supplied FRP forms** will be based on a unit cost per LF of 22 inch square FRP, single piece, tongue and groove forms per the Contract Specifications that the BPCA has stored from the previous contract. The contractor shall include the deduct unit cost for the forms not purchased under Items D, E, F and G above, and include the cost to transport the forms from Staten Island, Zip Code 10303, to the jobsite when required.

R. SPECIAL CONDITIONS

The Proposer acknowledges and shall include the cost for the following in the Proposal:

1. Some piles may have existing items/debris and chains that shall be removed completely prior to performing the work associated with each repair. The chains are for the floating docks and are to be relocated to an adjacent pile while performing work, and then moved back to complete repairs on the adjacent pile. If the chains cannot be removed without cutting, notify the Owner's representative immediately.
2. Provide means to maintain and collect debris, including boom around work area and boat on premises capable of retrieving floatable debris that leaves the immediate work area. The Contractor shall also readily provide the following for the Owner's Representative throughout the duration of the project:
 - a. Means, via work float or skiff, to access areas for review during site visits.
 - b. Safe means, such as a ladder or gangway, to access floating work platform from the wharf.
 - c. A changing station, storage area with heating and cooling for the Owner's divers.

1.09 ENGINEERING REVIEW AND SPECIAL INSPECTION

At key stages on each pile, engineering inspections are required to ensure the Work is being performed in accordance with the Contract Documents. These inspections will be

performed by a Special Inspector, as selected by the Construction Manager at the discretion of the Owner. The final acceptance of the Work will be performed by the Engineer of Record. The key stages are specific to each repair type and are listed in the table below. The items listed may not be all inclusive. Additional pre and post inspection criteria may be required at the discretion of the Special Inspector, Engineer of Record or Construction Manager.

A minimum of one (1) protective pile encasement, (1) riprap obstruction detail (ROD), and (1) alternate embedment detail (AED) shall be prepared by each diver to the full requirements of the Contract Documents for inspection by the Special Inspector. Only after the Special Inspector approves the repair can the diver be approved for production work. Each diver must be approved for the three (3) types of repairs noted above.

For the Hold Point inspection #1 through #5 defined below, the Contractor may not proceed with the next step in repair until the pile has been inspected in accordance with the Contract Documents Criteria. If no exceptions have been taken by the Special Inspector, the contractor may proceed. The final inspection #4 is expected to be a difficult approval for the backfilling and application of splashzone, however, the contractor will not be compensated for any additional work performed or any delays due to the failure of hold point inspections.

During all epoxy grout mixing, injection and pump events, the Special Inspector shall be onsite to ensure quality control of the materials and adherence to the Contract Documents. In addition, on the first pump event of epoxy grout, the Engineer of Record as well as the material manufacturer's representative must be onsite in addition to the Special Inspector.

The Contractor shall coordinate with the Construction Manager to maximize inspection sequencing and timing against the production of the divers. At a minimum, and subject to the Construction Manager's procedures, the contractor's dive crews shall provide daily reports of the piles ready for each of the hold point inspections, in groupings, by the pumping location. It is the responsibility of the Contractor to adequately inform the Special Inspector when piles are ready to be inspected. Any work completed without approval is at the Contractors risk.

Any exceptions noted during the Special Inspectors dive inspection shall be submitted to the Contractor within 16 hours of the inspection and preferably within the same work shift. All exceptions and re-work will be submitted to the Construction Manager within 48 hours of the initial inspection, or before the cleaning window expires, whichever is soonest. The Special Inspector must generate field reports for all inspections. The field reports shall be submitted to the Construction Manager and Engineer of Record for review.

Order of Operations, Soft and Hard Bottom Excavation, No AED, No ROD

| | |
|--|---|
| Diver: Measure Pile Exposed Length, Mark <u>Mudline</u> Pre-Excavation Tender: Record Measurements on Daily Report | |
| Diver: Excavate Pile, Minimum 2 <u>ft</u> Tender: Report Soft, Hard or Hard < 2' Bottom, Obstructions, <u>Backwall</u> interference, Batter Pile Interference etc... | |
| Diver: Remove all Items connected to the pile, Interferences Tender: Record specific items removed | |
| Diver: <u>Powerwash</u> Clean Piles, and <u>Backwall</u> As required Tender: Record Date and time of cleaning | |
| HOLD POINT #1 - Excavation and Cleaning - Dive Inspection If Approved, Proceed | 72 Hour Completion Window from Cleaning to Encasement |
| Diver: Install FRP Forms on Pile, Bottom Seal, Ports and Standoffs Tender: Record Completion | |
| Diver: Install Formwork on FRP Form as Engineered Tender: Record Completion | |
| Diver: Install Bottom Epoxy Plug in FRP Form Tender: Record Completion, Date and Time | |
| HOLD POINT #2 - Forming, Bracing, Bottom Plug - Dive Inspection | |
| Diver: Fill Form with Epoxy Grout, Lift 1 Tender: Record Completion, Date and time | |
| HOLD POINT #3a - Epoxy Injection - Lift 1 - Dive Inspection | 24 hr Completion Window |
| Diver: Fill Form with Epoxy Grout, Lift 2 (If Required) Tender: Record Completion, Date and time | |
| HOLD POINT #3b - Epoxy Pour - Lift 2 - Dive Inspection (If needed) | |
| Diver: <u>Handpack</u> top of Encasement Tender: Record Completion, Date and time | 24 Hour Window |
| Diver: Soft Backfill <u>Mudline</u> , Hard Backfill <u>Mudline</u> , Sand or <u>Groutbags</u> Tender: Record Completion, Date and time | |
| HOLD POINT #4 - Backfilling, Hand Pack Top, Final Dive Inspection If the Inspection Fails Diver: Repair/Replace all <u>non conforming</u> Items Tender: Record Completion, Date and Time | |
| HOLD POINT #5 - <u>Reinspection</u> - Final Dive Repeat As Necessary | |

| Order of Operations, AED, ROD | |
|---|--|
| Diver: Measure Pile Exposed Length, Mark <u>Mudline</u> Pre-Excavation Tender: Record Measurements on Daily Report | |
| Diver: Excavate Pile, Minimum 2 <u>ft</u> Tender: Report Soft, Hard or Hard < 2' Bottom, Obstructions, <u>Backwall</u> interference, Batter Pile Interference etc... | |
| Diver: Remove all Items connected to the pile, Interferences Tender: Record specific items removed | |
| Diver: <u>Powerwash</u> Clean Piles, and <u>Backwall</u> As required Tender: Record Date and time of cleaning | |
| HOLD POINT #1 - Excavation and Cleaning - Dive Inspection. Determination of Obstruction Detail (ROD) or Alternate embedment Detail (AED) If Approved, Proceed | |
| Diver: Install FRP Forms on Pile, Bottom Seal, Ports and Standoffs Tender: Record Completion | |
| Diver: Install Formwork on FRP Form as Engineered Tender: Record Completion | |
| Diver: Install AED or ROD Details Tender: Record Completion | |
| Diver: Install Bottom Epoxy Plug with AED and ROD in FRP Form Tender: Record Completion, Date and Time | |
| HOLD POINT #2 - Forming, Bracing, Bottom Plug - Dive Inspection | |
| Diver: Fill Form with Epoxy Grout, Lift 1 Tender: Record Completion. Date and time | |
| HOLD POINT #3a - Epoxy Injection - Lift 1 - Dive Inspection | |
| Diver: Fill Form with Epoxy Grout, Lift 2 (If Required) Tender: Record Completion. Date and time | |
| HOLD POINT #3b - Epoxy Pour - Lift 2 - Dive Inspection (If needed) | |
| Diver: <u>Handpack</u> top of Encasement Tender: Record Completion. Date and time | |
| Diver: Backfill remainder of <u>mudline</u> , Sand or <u>Groutbags</u> Tender: Record Completion, Date and time | |
| HOLD POINT #4 - Backfilling, Hand Pack Top, Final Dive Inspection | |
| If the Inspection Fails Diver: Repair/Replace all <u>non conforming</u> Items Tender: Record Completion, Date and Time | |
| HOLD POINT #5 - <u>Reinspection</u> - Final Dive Repeat As Necessary | |

72 Hour Completion Window from Cleaning to Encasement

24 hr Completion Window

24 Hour Window

| Order of Operations, <u>Backwall</u> and Batter Interferences | |
|---|---|
| Diver: Measure Pile Exposed Length, Mark <u>Mudline</u> Pre-Excavation Tender: Record Measurements on Daily Report | |
| Diver: Excavate Pile, Minimum 2 ft Tender: Report Soft, Hard or Hard < 2' Bottom, Obstructions, <u>Backwall</u> interference, Batter Pile Interference etc... | |
| Diver: Remove all Items connected to the pile, Interferences Tender: Record specific Items removed | |
| Diver: <u>Powervash</u> Clean Piles, and <u>Backwall</u> As required Tender: Record Date and time of cleaning | |
| HOLD POINT #1 - Excavation and Cleaning - Dive Inspection. Determination of 3-Side, <u>Backwall</u> Obstruction or Batter Pile <u>Backwall</u> If Approved, Proceed | 72 Hour Completion Window from Cleaning to Encasement |
| Diver: Install FRP Forms on Pile, Bottom Seal, Ports and Standoffs Tender: Record Completion | |
| Diver: Install Formwork on FRP Form as Engineered Tender: Record Completion | |
| Diver: Install <u>Backwall</u> Details, AED and/or ROD as required Tender: Record Completion | |
| Diver: Install Bottom Epoxy Plug (with AED and ROD) in FRP Form Tender: Record Completion, Date and Time | |
| HOLD POINT #2 - Forming, Bracing, Bottom Plug - Dive Inspection | |
| Diver: Fill Form with Epoxy Grout, Lift 1 Tender: Record Completion. Date and time | 24 hr Completion Window |
| HOLD POINT #3a - Epoxy Injection - Lift 1 - Dive Inspection | |
| Diver: Fill Form with Epoxy Grout, Lift 2 (If Required) Tender: Record Completion. Date and time | |
| HOLD POINT #3b - Epoxy Pour - Lift 2 - Dive Inspection (If needed) | |
| Diver: <u>Handpack</u> top of Encasement Tender: Record Completion. Date and time | 24 Hour Window |
| Diver: Backfill remainder of <u>mudline</u> , Sand or <u>Groutbags</u> Tender: Record Completion, Date and time | |
| HOLD POINT #4 - Backfilling, Hand Pack Top, Final Dive Inspection | |
| If the Inspection Fails Diver: Repair/Replace all <u>non conforming</u> Items Tender: Record Completion, Date and Time | |
| HOLD POINT #5 - <u>Reinspection</u> - Final Dive Repeat As Necessary | |

1.10 GENERAL CONDITIONS

The Contractor shall commence and perform the Work expeditiously in accordance with the Contractor's construction schedule with adequate, trained forces and shall achieve substantial completion and final completion within the times stated within the schedule.

Within the Form of Proposal, provide the total number of days which the Proposer proposes to complete the Work. The schedule is to commence with issuance of the Owner's Purchase Order.

1.11 EXISTING WORK

- A. ~~A.~~ Remove or alter existing work in such a manner as to prevent injury or damage to any portions of the existing work that remains.
- B. Repair or replace portions of existing work which have been altered during construction operations to match existing or adjoining work, as approved by the Owner. At the completion of operations, existing work shall be in a condition equal to or better than that which existed before new work started.

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1.12 LOCATION OF UNDERGROUND FACILITIES

- A. Coordinate with the Owner on the location of underground utilities and which utilities are to remain and be protected, and which are to be removed.
- B. Notify the Owner at least 24 hours prior to starting excavation work.

1.13 QUALITY ASSURANCE

- A. Use adequate number of skilled work personnel who are thoroughly trained and experienced in the necessary trades, and familiar with the specified requirements and methods required for proper performance of the work outlined in this specification.
- B. The Contractor shall coordinate the work to insure no conflicts occur to compromise the timely completion of all work specified.

1.14 WORKING CONDITIONS

- A. The Contractor is responsible for any precautions and scheduling necessary in order to maintain this status. Work may begin only after a schedule representing an acceptable plan is approved by the Owner.
- B. The Contractor shall coordinate day-to-day activities with the Owner. All conflicts will be resolved by the Owner's representative.

C. The Owner shall be notified a minimum of three days prior, when any floats are required to be moved within the North Cove.

1.15 WORKING HOURS

The Contractor is permitted to perform construction work between the hours of 7:00 AM and 4:30 PM Mondays through Fridays, excluding Saturdays, Sundays, and Federal Holidays. Work performed at any other time other than these periods will only be allowed pending approval of the Owner, following a 48 hour advanced request (72 hour for Sundays and Holidays) and a DSBS after hours work permit.

1.16 AVAILABILITY OF UTILITIES

- A. Electrical: The Contractor shall provide its own electrical power and equipment. OSHA requirements will govern the use of such utility.
- B. Water: The Contractor will be responsible for supplying its own water and equipment, including all hoses, adapters and backflow preventer as required.
- C. Sanitary Facilities: The Contractor shall be responsible for furnishing and maintaining temporary toilet facilities for their employees, and for the Owner's Engineer/Diver's.
- D. The Contractor is responsible for the cost of all utilities.

1.17 EQUIPMENT

The Contractor shall supply all equipment necessary to perform all work, including but not limited to cleaning materials, ladders, etc.

1.18 RECEIPT OF MATERIALS

Shipments of equipment, materials, and supplies shall be addressed to the Contractor, not the Owner. The Contractor shall provide all equipment, materials and labor for off-loading. The Owner will not accept shipments for the Contractor.

1.19 STORAGE OF MATERIALS

Contractor's materials may be stored on site at a location that is approved by the Owner.

1.20 EXISTING MATERIALS

The Owner shall have the opportunity to salvage all materials removed prior to disposal by Contractor.

1.21 SITE OFFICE FACILITIES AND STORAGE SHED

- A. The Contractor shall be required to provide at his own cost and expense one enclosure in the South East corner of North Cove Marina. Install and connect all utility services to said enclosure within five (5) days of start of work.
- B. The enclosure shall be for the express use of the Resident Engineer.
- C. Temporary Electrical Services:
1. Electrical work required for the enclosure will be furnished and maintained under this contract.
 2. The Contractor shall furnish, install and maintain a temporary electric feeder to the Resident Engineer's enclosure immediately upon its placement at the job site.
 3. The temporary electric feeder shall be at least 3 No. 6 THW wire and shall be protected by a 60 ampere fused safety switch, complying with codes and utility requirements having jurisdiction.
 4. Make all arrangements and pay all costs to provide electric service.
 5. Pay all costs for current consumed and for maintaining system in operating condition, including furnishing of necessary bulb replacements, lamps, etc., for thirty (30) days after date of substantial completion acceptance.
 6. Disposition of electric work: Upon expiration date in sub-paragraph c, the temporary feeder, safety switch, etc., shall be removed and disposed of as directed.
 7. All repair work due to these removals shall be the responsibility of the Contractor.
- D. Maintenance:
1. The Contractor shall provide and pay all costs for heat and fuel, and regular daily janitor service. Furnish toilet paper, cloth towels, soap, and maintain the field office in first-class condition, including all repairs, until 30 days after the date of substantial completion acceptance.
 2. Upon final acceptance of all work under the contract, unless sooner directed, the Contractor shall have all services disconnected and capped to the satisfaction of the Resident Engineer.
- E. Permits
- The Contractor shall make the necessary arrangements for, and obtain all permits required for this work.
- F. The Contractor shall provide his own storage. No equipment or materials storage will be provided by the Owner.

1.22 POWER OUTAGE

Needed power outages shall be arranged only with prior approval from the Owner, with duration and affected areas held to a minimum.

1.23 FINAL INSPECTION

Final Inspection will not be made until all work under the contract is complete. The Contractor shall notify the Owner in writing 48 hours prior to the date on which the project will be ready for final inspection.

1.24 DUMPING AREA

- A. All discarded material shall be removed from the Owner's property and disposed of in an approved site complying with Local, State, and Federal regulations. Certified weight tickets shall be supplied to the Owner within 15 days of the date of the weight ticket for all trash and construction debris disposed. All dumpsters/containers shall be supplied by the Contractor. The contractor shall provide appropriate signs or covers to prevent use by Tenants.
- B. No material shall be washed or swept out of equipment or vehicles (including concrete from chutes of trucks, loose debris, etc.) onto Owner property or in the water. Any material spilled from Contractor furnished dumpsters/containers shall be immediately cleaned up by the Contractor.

1.25 RECYCLABLES

The Contractor shall recycle or reuse all material designated as recyclable or prohibited from landfilling. Definitions for recyclables and landfill prohibited material can be obtained from the contracted trash hauler. Certified weight tickets shall be supplied to the Owner within 15 days of the date of removal from the facility for all material recycled or reused, and for landfill prohibited materials.

1.26 AS-BUILT DRAWINGS

- A. The Owner will furnish one complete set of black and white prints of all drawings which shall be used to indicate any changes from the contract set. Each sheet shall be marked "AS-BUILT DRAWINGS" in red pencil, and all changes or modifications shall be noted thereon by the Contractor.
- B. Changes shall be noted during the construction process for all trades.
- C. Keep "AS-BUILT DRAWINGS" current. Do not permanently conceal any work until the required information has been accurately recorded.
- D. Use colored pencils or pens for graphic work conforming to the following color code:

Red - Architectural and Structural Work

Green - Electrical Work

Use blue pen for written work

- E. Submit a complete set of "AS-BUILT DRAWINGS" to the Owner when all work has been completed, or as directed.

PART II - PRODUCTS

Not used.

PART III - EXECUTION

Not used.

END OF SECTION 01110

SECTION 01140

WORK RESTRICTIONS

PART I - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to this section.

1.02 USE OF PREMISES

- A. Use of Site: Limit use of premises to work in areas indicated. Do not disturb portions of site beyond areas in which the Work is indicated.
 - 1. Limits: Confine construction operations to those areas delineated as included in the Construction Documents.
 - 2. Owner Occupancy: Allow for Owner occupancy of portions of the site and for use by the public at any and all times during the life of the contract. The Owner reserves the right to maintain and provide full public access to completed portions of the Battery Park City Esplanade within the contract limits at any time during the entire life of the contract. Contractor will be responsible for securing and maintaining temporary construction fencing as necessary to achieve and maintain this access.
 - 3. Contractor shall, throughout the life of the contract, maintain clear access to all areas of the Esplanade to personnel of Battery Park City Authority (Owner) for maintenance and repair operations. Specifically, the Owner and/or its agents shall be unencumbered from performing all required watering, planting, and maintenance operations for all areas adjacent to and within the contract limits.
 - 4. Construction Gates / Entrances: Keep all construction gates / entrances serving the premises clean, clear and available to the Owner, Owner's employees, emergency vehicles at all times. Do not use these areas for parking or storage of materials.
 - a. Schedule deliveries to minimize use of construction gates and entrances.
 - b. Schedule deliveries to coordinate with other contractor's gaining access to the site.
 - c. Provide flag-person services for all deliveries into and out of the site so as to protect the public.
 - d. Secure all construction entrances and gates to the site at all times.
 - e. Provide durable signage limiting public access to the construction site at all construction gate / entrances as directed by the Construction Manager.

- f. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
- C. Use of Existing Site: Maintain existing site throughout the construction period. Repair damage caused by construction operations.

1.03 OCCUPANCY REQUIREMENTS

- A. Partial Owner Occupancy: Owner may occupy portions of the site during the construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's operations.

PART II – PRODUCTS

Not used.

PART III – EXECUTION

Not used.

END OF SECTION 01140

SECTION 01310

PROJECT MANAGEMENT AND COORDINATION

PART I - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to this section.

1.02 SUMMARY

- A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
 - 1. General project coordination procedures.
 - 2. Conservation.
 - 3. Coordination Drawings.
 - 4. Administrative and supervisory personnel.
 - 5. Project meetings.
- B. Each contractor shall participate in coordination requirements. Certain areas of responsibility will be assigned to a specific contractor.
- C. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Division 1 – Section "Construction Progress Documentation" for preparing and submitting the Contractor's Construction Schedule.
 - 2. Division 1 – Section "Execution Requirements" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
 - 3. Division 1 – Section "Closeout Procedures" for coordinating Contract closeout.

1.03 COORDINATION

- A. Coordination: Each contractor shall coordinate its construction operations with those of other contractors and entities to ensure efficient and orderly installation of each part of the Work. Each contractor shall coordinate its operations with operations, included in different Sections that depend on each other for proper installation, connection, and operation.
 - 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 - 2. Coordinate installation of different components with other contractors to ensure maximum accessibility for required maintenance, service, and repair.

3. Make adequate provisions to accommodate items scheduled for later installation.
 4. Provide detailed written construction work plans within 5 days of award in a format and containing information as requested by the Construction Manager.
- B. Where necessary, prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.
- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
1. Preparation of Contractor's Construction Schedule.
 2. Preparation of the Schedule of Values for payment to completed work.
 3. Installation and removal of temporary facilities and controls.
 4. Delivery and processing of submittals.
 5. Progress meetings.
 6. Pre-installation conferences.
 7. Project closeout activities.
- D. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials.
1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work.

1.04 SUBMITTALS

- A. Coordination Drawings / Work Plans: Prepare Coordination Drawings and/or detailed work plans where careful coordination is needed for installation of products and materials fabricated by separate entities and/or as requested by the Construction Manager. Prepare coordination drawings and/or work plans where limited space availability necessitates utilization of space for efficient installation of different components.
1. Indicate relationship of components shown on separate Shop Drawings and/or work plans.
 2. Indicate required installation sequences.
- B. Staff Names: Within 5 days of award, submit a list of principal staff assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home and office telephone numbers. Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to Project. Post

copies of list in Project meeting room, in temporary field office, and by each temporary telephone.

1.05 ADMINISTRATIVE AND SUPERVISORY PERSONNEL

- A. General: In addition to Project superintendent, provide other administrative and supervisory personnel as required for proper performance of the Work.
 - 1. Project Manager: Submit resume confirming a minimum of 15 years of underwater construction experience.
 - 2. Project superintendent: Submit resume confirming a minimum of 10 years of underwater construction experience.
 - 3. Office Engineer: Submit resume confirming a minimum of 5 years of marine construction experience.
 - 4. Dive Superintendent: Submit resume confirming a minimum of 10 years of underwater construction experience.
 - 5. Include special personnel required for coordination of operations with other contractors.
 - 6. Site Safety Representative: Submit resume confirming a minimum of 5 years of underwater construction site safety experience.

1.06 PROJECT MEETINGS

- A. General: Schedule and conduct meetings and conferences at Project site, unless otherwise indicated.
 - 1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner, and Construction Manager of scheduled meeting dates and times.
 - 2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
 - 3. Minutes: Record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner, Construction Manager, and the Engineer, within 5 days of the meeting.
- B. Pre-construction Conference: Schedule a pre-construction conference before starting construction, at a time convenient to Owner, Construction Manager and the Engineer, but no later than 5 days after execution of the Agreement. Hold the conference at Project site or another convenient location. Conduct the meeting to review responsibilities and personnel assignments.
 - 1. Attendees: Authorized representatives of Owner, Construction Manager, Engineer, and their consultants; Contractor and its superintendents; major subcontractors; manufacturers; suppliers; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.

2. Agenda: Discuss items of significance that could affect progress, including the following:
 - a. Tentative construction schedule.
 - b. Phasing.
 - c. Critical work sequencing.
 - d. Designation of responsible personnel.
 - e. Procedures for processing field decisions and Change Orders.
 - f. Procedures for processing Applications for Payment.
 - g. Distribution of the Contract Documents.
 - h. Submittal procedures.
 - i. Preparation of Record Documents.
 - j. Use of the premises.
 - k. Responsibility for temporary facilities and controls.
 - l. Parking availability.
 - m. Office, work, and storage areas.
 - n. Equipment deliveries and priorities.
 - o. Testing and inspection requirements.
 - p. Required performance results.
 - q. Protection of construction personnel.
 - r. First aid.
 - s. Security.
 - t. Progress cleaning.
 - u. Working hours.
 - v. MBE/WBE compliance reporting requirements.
 3. Record significant conference discussions, agreements, and disagreements.
 4. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.
- C. Progress Meetings: Conduct progress meetings at biweekly intervals. Coordinate dates of meetings with preparation of payment requests.
1. Attendees: In addition to representatives of Owner, Construction Manager, and Engineer, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
 2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
 - a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's Construction Schedule.

Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.

b. Review present and future needs of each entity present, including the following:

1. Interface requirements.
2. Sequence of operations.
3. Status of submittals.
4. Deliveries.
5. Off-site fabrication.
6. Access.
7. Site utilization.
8. Temporary facilities and controls.
9. Work hours.
10. Hazards and risks.
11. Progress cleaning.
12. Quality and work standards.
13. Change Orders.
14. Documentation of information for payment requests.

3. Reporting: Distribute minutes of the meeting to each party present and to parties who should have been present. Include a brief summary, in narrative form, of progress since the previous meeting and report.

a. Schedule Updating: Revise Contractor's Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

D. Coordination Meetings: Conduct Project coordination meetings as needed. Project coordination meetings are in addition to specific meetings held for other purposes, such as progress meetings and pre-installation conferences.

1. Attendees: In addition to representatives of Owner, Construction Manager, and Engineer, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.

2. Agenda: Review and correct or approve minutes of previous coordination meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.

a. Combined Contractor's Construction Schedule: Review progress since the last coordination meeting. Determine whether each contract is on time,

ahead of schedule, or behind schedule, in relation to Combined Contractor's Construction Schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract time.

- b. Schedule Updating: Revise Combined Contractor's Construction Schedule after each coordination meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with report for each meeting.
 - c. Review present and future needs of each contractor present, including the following:
 - 1. Interface requirements.
 - 2. Sequence of operations.
 - 3. Status of submittals.
 - 4. Deliveries.
 - 5. Off-site fabrication.
 - 6. Access.
 - 7. Site utilization.
 - 8. Temporary facilities and controls.
 - 9. Work hours.
 - 10. Hazards and risks.
 - 11. Progress cleaning.
 - 12. Quality and work standards.
 - 13. Change Orders.
3. Reporting: Record meeting results and distribute copies within two (2) days to everyone in attendance and to others affected by decisions or actions resulting from each meeting.

PART II – PRODUCTS

Not used.

PART III – EXECUTION

Not used.

END OF SECTION 01310

SECTION 01320
CONSTRUCTION PROGRESS DOCUMENTATION

PART I - GENERAL

1.01 SUBMITTALS

Submit the following in accordance with Section entitled "Submittal Procedures."

A. Schedules

1. Construction schedule (Owner)
2. Material delivery schedule (Owner)

1.02 CONSTRUCTION SCHEDULE

Within 5 days after receipt of the Notice of Award, prepare and submit to the Owner's representative for approval a Critical Path Method (CPM) Schedule.

1.03 MATERIAL DELIVERY SCHEDULE

A. Initial Schedule

Within 10 calendar days after approval of the proposed construction schedule, submit for Owner's representative approval a schedule showing procurement plans for materials and equipment. Submit in the format and content as prescribed by the Owner's representative, and include as a minimum the following information:

1. Description.
2. Date of the purchase order.
3. Promised shipping date.
4. Name of the manufacturer or supplier.
5. Date delivery is expected.
6. Date the material or equipment is required, according to the current construction schedule.

1.04 NETWORK ANALYSIS SYSTEM (NAS)

- A. As an alternative to the critical path method (CPM) schedule, the Contractor may use, subject to the approval of the Owner's Representative, some other computer generated network analysis system affording similar and equal information and control to that provided by the CPM.
- B. The schedule shall have a minimum of 25 activities and a maximum of 200 activities.

The schedule shall identify as a minimum:

1. Construction time for all major systems and components;
2. Manpower requirements for each activity;
3. Major submittals and submittal processing time; and
4. Major material and equipment lead time.
5. Bent sequence for inspection purposes.

C. CPM Submittals and Procedures

Submit all network analysis and updates electronically via e-mail. The network analysis system shall be submitted in Microsoft Project 2010. The network analysis system shall be kept current, with changes made to reflect the actual progress and status of the construction.

1.05 UPDATED SCHEDULES

Update the construction schedule and material delivery schedule at monthly intervals to correspond to payment applications or when schedule has been revised. Reflect any changes occurring since the last update. Submit copies of the purchase orders and confirmation of the delivery dates as directed by the Owner's representative.

PART II - PRODUCTS

Not used.

PART III - EXECUTION

Not used.

END OF SECTION 01320

SECTION 01330

SUBMITTAL PROCEDURES

PART I - GENERAL

1.01 DEFINITIONS

A. Submittal: Submittals requirements are specified in the respective specification sections.

B. Types of Submittals (SD)

1. SD-01 Preconstruction Submittals

Certificates of Insurance, List of Proposed Subcontractors, List of Proposed Products, Construction Progress Schedule, Submittal Register, Schedule of Prices, Health and Safety Plan, Work Plan, Quality Control Plan, Environmental Protection Plan, Site Utilization Plan.

2. SD-02 Shop Drawings

- a. Drawings, diagrams and schedules specifically prepared to illustrate some portion of the work.
- b. Diagrams and instructions from a manufacturer or fabricator for use in producing the product and acts as aids to the Contractor for integrating the product or system into the project.
- c. Drawings prepared by or for the Contractor to show how multiple systems and interdisciplinary work will be coordinated. An attachment shall be provided with the Shop Drawings which clearly define the methodology for each repair type.
- d. Approval of shop drawings shall not relieve the Contractor of the responsibility for any errors or for furnishing materials of the proper size.

3. SD-03 Product Data.

Product data includes but is not limited to the following:

- a. FRP formwork
- b. Epoxy Grout
- c. Hand Pack Material
- d. Trowel Grade Epoxy
- e. Bottom Seal
- f. Screws
- g. Standoffs
- h. Engineered Products for Form System
- i. Grout Bags
- j. Sand Bags
- k. Samples of warranty language when the contract requires extended product warranties.

4. SD-04 Samples

5. SD-05 Design Data
Calculations, mix designs, analyses or other data pertaining to a part of work.
6. SD-06 Test Reports
 - a. Report signed by authorized official of testing laboratory that a material, product or system identical to the material, product or system to be provided has been tested in accord with specified requirements. (Testing must have been within three (3) years of date of contract award for the project.)
 - b. Report which includes findings of a test required to be performed by the Contractor on an actual portion of the work or prototype prepared for the project before shipment to job site.
 - c. Report which includes finding of a test made at the job site or on sample taken from the job site, on portion of work during or after installation.

The New York City Department of Small Business Services (DSBS) Permit shall be satisfied under the direction of the Construction Manager. This includes but is not limited to the concrete testing agency and concrete supplier, TR2 and TR3 filings, and the Contractor's PW2 filing.

7. SD-07 Certificates
 - a. Statements signed by responsible officials of manufacturer of product, system or material attesting that product, system or material meets specification requirements. Must be dated after award of project contract and clearly name the project.
 - b. Document required of Contractor, or of a supplier, installer or subcontractor through Contractor, the purpose of which is to prove quality of orderly progression of a portion of the work by documenting procedures, acceptability of methods or personnel qualifications.
8. SD-08 Manufacturer's Instructions
 - a. Preprinted material describing installation of a product, system or material, including special notices and Material Safety Data sheets concerning impedances, hazards and safety precautions.
9. SD-09 Closeout Submittals
 - a. The Construction Manager is responsible for providing the following to the Engineer of Record for review prior to the project close out:
 - i. Field Reports
 1. Upon completion of the work, and prior to the final project closeout, the Construction Manager shall submit to the Engineer of Record all Field Reports from the engineering review site visits. These include, but are not limited to:
 - a. Certification by the Special Inspector that all piles have been repaired as per the contract documents.

- b. Certification by the Special Inspector that all test results have meet or exceeded the minimum requirements laid out in the Contract Documents.
- c. Field reports from the Special Inspector confirming that all concrete pumping operations and all the material placed were performed in accordance with the Contract Documents.

ii. As-Built Drawings:

- 1. Contractor shall submit six (6) sets of drawings, marked "As-Built" within four (4) weeks upon Contractor demobilization. These drawings shall be submitted to the Construction Manager, who shall forward to the Engineer of Record. Approval from the Engineer of Record is required for the final project closeout.

iii. Test Reports:

- 1. Upon completion of the work, and prior to the final project closeout, the Construction Manager shall submit to the Engineer of Record all Test Reports from the required materials and products testing as laid in the Contract Documents. Test reports must confirm that all materials and products placed during the Work have met or exceeded the minimum requirements of the Contract Documents in order for the Engineer of Record's approval. All Test Reports must be approved by the Engineer of Record for the final project closeout.

iv. Photographs

- 1. The Construction Manager shall submit to the Engineer of Record a typical photograph illustrating each type of repair in its Pre-Inspection and Post-Inspection completeness.

- v. The items required for final review by the Engineer of Record are not limited to those listed above.

10. For this project, the requirements under SD-03 and SD-08 shall be combined under one submittal for "Product Data". Product data will be submitted for all repairs identified in the contract drawings. The product data submittal may be combined with a number of submittals which reference one particular repair.

- C. Approving Authority: Person authorized to approve submittal. The Engineer of Record shall review submittals in regard to materials, methodology, shop drawings and other components involved in the quality assurance of the work. The Construction Manager shall review submittals in regard to but not limited to site utilization, disposal, coordination, environmental controls, schedule, safety and health requirements, etc.
- D. Work: As used in this section, on- and off-site construction required by contract documents, including labor necessary to produce submittals, construction, materials, products, equipment, and systems incorporated or to be incorporated in such construction.

PART II – PRODUCTS (NOT APPLICABLE)

PART III – EXECUTION

3.01 SUBMITTAL REGISTER

- A. Within 5 calendar days after receipt of Notice to Proceed, provide submittal register listing all submittals required by the contract. Contractor shall maintain at the site, an up-to-date submittal register showing the status of all submittals as the work progresses. The submittal register format is subject to review and approval by the Construction Manager and Engineer of Record. The Contractor shall indicate critical submittals and critical dates for approval. The register shall also include the following at a minimum:
 - 1. Activity Number: Activity number from the project schedule.
 - 2. Transmittal Number: Contractor assigned list of consecutive numbers.
 - 3. Contractor Submittal Date: Scheduled date for approving authority to receive submittals.
 - 4. Contractor Approval Date: Date Contractor needs approval of submittal.
 - 5. Contractor Material Date: Date that Contractor needs material delivered to Contractor control.
- B. The Construction Manager or Engineer of Record will not review submittals until the register has been submitted in accordance with the previous paragraph and approved. Should a submittal register be generated by the Engineer of Record, it can be used as a guideline by the Contractor but does not relieve him of submissions required by the Contract Documents that may have been omitted.
- C. Items may be added or removed from the Submittal Register throughout the duration of the Work, as desired by the Construction Manager or Engineer of Record. Additional submittals that are not listed in the Submittal Register may be required as per the Construction Manager's contract.

3.02 PROCEDURES FOR SUBMITTALS

- A. Contractor shall make submittals required by the Contract Documents, and revise and resubmit as necessary to establish compliance with the specified requirements. Submittals that are not required will not be reviewed by the Construction Manager.
 - 1. Constraints
 - a. Submittals listed or specified in this contract shall conform to provisions of this section, unless explicitly stated otherwise.
 - b. Submittals shall be complete for each definable feature of work; components of definable feature interrelated as a system shall be submitted at same time.
 - c. When acceptability of a submittal is dependent on conditions, items, or materials included in separate subsequent submittals, submittal will be returned without

review.

- d. Approval of a separate material, product, or component does not imply approval of assembly in which item functions.

2. Scheduling

- a. Coordinate scheduling, sequencing, preparing and processing of submittals with performance of work so that work will not be delayed by submittal processing. Allow for potential requirements to resubmit.
- b. Except as specified otherwise, allow for review period, beginning with receipt by approving authority, which includes at least 5 working days for submittals. Period of review for each re-submittal is the same as for initial submittal.

3.03 VARIATIONS

- A. Variations from contract requirements require the Engineer of Record approval. Do not substitute materials, equipment, or methods unless such substitution has been specifically accepted in writing by the Construction Manager.
 - 1. Considering Variations: Discussion with the Construction Manager prior to submission will help ensure functional and quality requirements are met and minimize rejections and re-submittals. When contemplating a variation which results in lower cost, consider submission of the variation as a Value Engineering Change Proposal (VECP).
 - 2. Proposing Variations: When proposing a variation, deliver written request to the Construction Manager, with documentation of the nature and features of the variation and why the variation is desirable and beneficial to the Owner. If lower cost is a benefit, also include an estimate of the cost-savings. In addition to documentation required for variation, include the submittals required for the item. Clearly mark the proposed variation in all documentation, identify variations from the contract requirements and changes in other work or products.
 - 3. Warranting That Variations Are Compatible: When delivering a variation for approval, Contractor warrants that this contract has been reviewed to establish that the variation, if incorporated, will be compatible with other elements of work. In submitting a substitution or variation, the Contractor represents that he will coordinate the installation of accepted substitutions or variation, and additional costs or delays caused by the substitution or variation will not constitute grounds for adjustments to the contract.
 - 4. Review Schedule Is Modified: In addition to normal submittal review period, a minimum period of five (5) and maximum period of 14 working days will be allowed for consideration by the Owner of submittals with variations.

3.04 CONTRACTOR'S RESPONSIBILITIES

- A. Determine and verify field measurements, materials, field construction criteria; review each submittal; and check and coordinate each submittal with requirements of the work and contract documents.
- B. Transmit submittals to Construction Manager in accordance with schedule on approved

Submittal Register, and to prevent delays in the work, delays to the Owner, or delays to separate Contractors.

- C. Advise Construction Manager as required by paragraph entitled: "Variations."
- D. Correct and resubmit submittal as directed by approving authority. When resubmitting disapproved transmittals or transmittals noted for re-submittal, the Contractor shall provide copy of that previously submitted transmittal including all reviewer comments for use by approving authority. Direct specific attention in writing or on resubmitted submittal, to revisions not requested by approving authority on previous submissions.
- E. Submittals are to be done electronically, via email to the team determined by the owner, in PDF format.
- F. Furnish hard copies of submittal when requested by the Construction Manager, to a limit of 6 copies per submittal.
- G. Complete work which must be accomplished as basis of a submittal in time to allow submittal to occur as scheduled.
- H. Ensure no work has begun until submittals for that work have been reviewed and returned stamped by the Engineer of Record, as explained in Paragraph 3.08 D or this Section, except to the extent that a portion of work must be accomplished as basis of submittal.

3.05 DELIVERY OF SUBMITTALS

- A. Transmittal Form: Transmit each submittal, except sample installations and sample panels, to office of approving authority. Transmit submittals electronically with transmittal form prescribed by Construction Manager and standard for project. The transmittal form shall identify Contractor, indicate date of submittal, and include information prescribed by transmittal form and required in paragraph entitled "Identifying Submittals." Process transmittal forms to record actions regarding sample panels and sample installations. All submittals must be sent to the Construction Manager, who shall forward submittals on to the Engineer of Record, if required, for approval.
- B. Identifying Submittals: Identify submittals, except sample panel and sample installation, with the following information permanently adhered to or noted on each separate component of each submittal and noted on transmittal form. Mark each copy of each submittal identically, with the following:
 - 1. Construction contract number.
 - 2. Section number of the specification section by which submittal is required.
 - 3. Submittal description (SD) number of each component of submittal.
 - 4. When a resubmission, add alphabetic suffix on submittal description, for example, SD-10A, to indicate resubmission.
 - 5. Name, address, and telephone number of subcontractor, supplier, manufacturer, and any other second tier Contractor associated with submittal.
 - 6. Product identification and location in project.

3.06 FORMAT OF SUBMITTALS

A. Format for SD-02 Shop Drawings

1. Shop drawings shall not be less than 8½ by 11 inches nor more than 22 by 34 inches. Submit in the form of blueline or blackline prints of each sheet. Blue prints will not be accepted.
2. Present 8½ by 11 inch sized shop drawings as part of the bound volume for submittals required by section. Present larger drawings in sets.
3. Include on each drawing the drawing title, number, date, and revision numbers and dates, in addition to information required in paragraph entitled "Identifying Submittals."
4. Dimension drawings, except diagrams and schematic drawings; prepare drawings demonstrating interface with other trades to scale. Shop drawing dimensions shall be the same unit of measure as indicated on the contract drawings. Identify materials and products for work shown.

B. Format of SD-03 Product Data and SD-08 Manufacturer's Instruction's

1. Present product data submittals for each section as a complete, bound volume. Include table of contents, listing page and catalog item numbers for product data.
2. Indicate, by prominent notation, each product which is being submitted; indicate specification section number and paragraph number to which it pertains
3. Supplement product data with material prepared for project to satisfy submittal requirements for which product data does not exist. Identify this material as developed specifically for project.

C. Format of SD-04 Samples

1. Furnish samples in sizes below, unless otherwise specified or unless the manufacturer has prepackaged samples of approximately the same size as specified:
 - a. Sample of Equipment or Device: Full size.
 - b. Sample of Materials Less Than 2 by 3 inches: Built up to 8½ by 11 inches.
 - c. Sample of Materials Exceeding 8½ by 11 inches: Cut down to 8½ by 11 inches and adequate to indicate color, texture, and material variations.
 - d. Sample of Linear Devices or Materials: 10 inch length or length to be supplied, if less than 10 inches. Examples of linear devices or materials are conduit and handrails.
 - e. Sample of Non-Solid Materials: Pint. Examples of non-solid materials are sand and paint.
 - f. Color Selection Samples: 2 by 4 inches.

- g. Sample Panel: 4 by 4 feet.
 - h. Sample Installation: 100 square feet.
- D. Format of SD-05 Design Data and SD-07 Certificates
 - 1. Provide design data and certificates on 8½ by 11 inches paper. Provide a bound volume for submittals containing numerous pages.
- E. Format of SD-06 Test Reports
 - 1. Provide reports on 8½ by 11 inch paper in a complete bound volume.
 - 2. Indicate by prominent notation, each report in the submittal. Indicate specification number and paragraph number to which it pertains.
- F. Format of SD-01 Preconstruction Submittals and SD-09 Closeout Submittals
 - 1. When submittal includes a document which is to be used in project or become part of project record, other than as a submittal, do not apply Contractor's approval stamp to document, but to a separate sheet accompanying document.
 - 2. As-Built drawings sets shall be full sized (24" x 32") and represent the installed condition of the Work. The drawings shall clearly mark out where the installed condition differs from the Contract Documents. In addition to the hard copies, the As-Built drawings shall be submitted electronically in both AutoCAD format (.dwg) version 2007 or newer and Portable Document Format (.pdf).
 - 3. Photographs shall be submitted electronically in JPEG-format (.jpg) as well as Portable Document Format (.pdf). Photographs shall be in color and shall be a minimum of 3 megapixels in size. The location, photo directions, elevation, and date/time taken shall be submitted in conjunction with the PDF submission.

3.07 QUANTITY OF SUBMITTALS

- A. Unless otherwise noted, all submittals should be in PDF format and transmitted electronically. If hard copies are requested:
 - 1. Number of copies of SD-02 Shop Drawings
 - a. The Owner and/or Construction Manager may designate that all submittals shall be "paperless" and the contractor may transmit submittals via electronic file.
 - b. Submit four (4) copies of submittals of Shop Drawings. One (1) print with the Construction Manager's review comments will be returned to the Contractor. The Contractor may make and distribute such copies as desired.
 - 2. Number of Copies of SD-03 Product Data and SD-08 Manufacturer's Instructions
 - a. Submit in compliance with quantity requirements specified for shop drawings.
 - 3. SD-04 Number of Samples

- a. Submit two (2) samples, or two (2) sets of samples showing range of variation, of each required item. One (1) approved sample or set of samples will be retained by approving authority and one (1) will be returned to Contractor.
 - b. Submit one (1) sample panel. Include components listed in technical section or as directed.
 - c. Submit one (1) sample installation, where directed.
 - d. Submit one (1) sample of non-solid materials.
- 4. Number of Copies SD-05 Design Data and SD-07 Certificates
 - a. Submit in compliance with quantity requirements specified for shop drawings.
- 5. Number of Copies SD-06 Test Reports
 - a. Submit in compliance with quantity requirements specified for shop drawings.
- 6. Number of Copies of SD-01 Preconstruction Submittals and SD-09 Closeout Submittals.
 - a. Unless otherwise specified, submit administrative submittals compliance with quantity requirements specified for shop drawings. Submit six (6) copies of all Closeout Submittals.

3.08 REVIEW BY OWNER'S REPRESENTATIVE

- A. Review by the Construction Manager and Engineer of Record does not relieve the Contractor from responsibility for errors or omissions which may exist in the submitted data.
- B. Revisions:
 - 1. Make revisions required by the Construction Manager and Engineer of Record.
 - 2. If the Contractor considers any required revision to be a change, he shall so notify the Construction Manager in accordance with the specifications.
 - 3. Make only those revisions directed or accepted by the Construction Manager and Engineer of Record.
- C. Reimbursement of Owner's Representative's Costs:
 - 1. In the event substitutions are proposed to the Construction Manager after the Contract has been awarded, the Construction Manager will record all time used by him and by his consultants in evaluation of each such proposed substitution.
 - 2. Whether or not the Construction Manager and/or Engineer of Record accepts a proposed substitution, the Contractor may be responsible for the costs of the Construction Manager and/or Engineer of Record and consultants for all time spent by them in evaluating the proposed substitution, plus administrative fees. The costs will be deducted from outstanding pay requests due to the Contractor by way of a Change

Order.

D. Engineer of Record Review Stamp:

1. The Engineer of Record will use the following approval statement when returning submittals to the Contractor as "Fabrication May Proceed" or "Do Not Fabricate":
 - a. "Submission has been checked for general conformance with design concept of the project. Comments made on [type of submittal] do not relieve the Contractor from compliance with requirements of the Contract Documents. Contractor is responsible for dimensions to be confirmed and correlated at the job site; for information that pertains solely to the fabrication processes or to techniques of construction; and for coordination of the work of all trades."

Fabrication May Proceed: _____

Do Not Fabricate: _____

By: _____

Date: _____

Note: _____

2. Actions Possible

- a. The Engineer of Record review stamp will indicate the status of the submittal, and corresponding action to be taken by the Contractor as follows:
 - i. Submission is in general conformance with design concept: When the Engineer of Record marks the submittal "Submission is in general conformance with design concept", the Work covered by the submittal may proceed, provided it complies with the requirements of the Contract Documents. Final payment depends on that compliance.
 - ii. Submission is in general conformance with design concept, except as noted: When the Engineer of Record marks the submittal "Submission is in general conformance with design concept, except as noted", the Work covered by the submittal may proceed provided it complies with the notations on the submittal and requirements of the Contract Documents. Final payment depends on that compliance.
 - iii. Revise and Resubmit: When the Engineer of Record marks the submittal "Revise and Resubmit", the Work covered by the submittal may proceed provided it complies with the notations on the submittal and requirements of the Contract Documents. The submittal must be revised to comply with the notations on the submittal and requirements of the Contract Documents, and must then resubmit to the Engineer of Record. Final payment depends on that compliance.
 - iv. Submission is rejected for non-conformance with design concept: When the Engineer of Record marks the submittal "Submission is rejected for non-conformance with design concept", do not proceed with the Work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Revise and prepare a new submittal according to the notations, resubmit without delay. Repeat if necessary to obtain a different action mark.

Do not use, or allow others to use submittals marked "Submission is rejected for non-conformance with design concept" at the Project Site or elsewhere where Work

is in progress.

PART IV – MEASUREMENT AND PAYMENT

Include within the Contract prices the amount sufficient to cover all costs for work of this section. No separate payment will be made for work completed under this section. A Schedule of Values shall be submitted to and approved by the Owner's Representative.

END OF SECTION 01330

SECTION 01450
QUALITY ASSURANCE

PART I - GENERAL

1.01 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

| | |
|------------|--|
| ASTM A880 | Criteria for Use in Evaluation of Testing Laboratories and Organization for Examination and Inspection of Steel, Stainless Steel, and Related Alloys |
| ASTM C1077 | Laboratories Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Laboratory Evaluation |
| ASTM C31 | Standard Method of Making and Curing Concrete Compressive and Flexural Test Specimens in the Field. |
| ASTM C39 | Standard method of Test for Compressive Strength of Cylindrical Concrete Specimens. |
| ASTM C94 | Standard Specification for Ready-Mix Concrete. |
| ASTM C138 | Standard Method of Test for Unit Weight, Yield, and Air Content of Concrete. |
| ASTM C172 | Standard Method of Sampling Fresh Concrete. |
| ASTM C192 | Standard Method of Making and Curing Concrete Test Specimens in the Laboratory. |
| ASTM C214 | Recommended Practice for Evaluation of Compression Test Results of Field Concrete. |
| ASTM D3740 | (Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction |
| ASTM E329 | Agencies Engaged in the Testing and/or Inspection of Materials Used on Construction |
| ASTM E543 | Evaluating Agencies that Perform Nondestructive Testing |

1.02 SUBMITTALS

Submit the following in accordance with Section 01330 entitled "Submittal Procedures."

A. Contractor Production Report.

1.03 TESTING

Except as stated otherwise in the specification sections, perform sampling and testing required under this Contract.

- A. Provide an independent testing laboratory qualified to perform sampling and tests required by this Contract. When the proposed testing laboratory is not accredited by an acceptable "Qualified National Authority" listed in the paragraph entitled "Qualified National Authority," submit to the Contracting Officer for approval, certified statements, signed by an official of the testing laboratory attesting that the proposed laboratory, meets or conforms to the following requirements:
 - 1. Laboratories engaged in testing of construction materials shall meet the requirements of ASTM E329.
 - 2. Laboratories engaged in testing of concrete and concrete aggregates shall meet the requirements of ASTM C1077.
 - 3. Laboratories engaged in testing of soil and rock, as used in engineering design and construction, shall meet the requirements of ASTM D3740.
 - 4. Laboratories engaged in inspection and testing of steel, stainless steel, and related alloys will be evaluated according to ASTM A880.
 - 5. Laboratories engaged in nondestructive testing (NDT) shall meet the requirements of ASTM E543.
 - 6. Laboratories engaged in Hazardous Materials Testing shall meet the requirements of OSHA and EPA.
- B. Qualified National Authorities are the National Voluntary Laboratory Accreditation Program (NVLAP) administered by the National Institute of Standards and Technology, the American Association of State Highway and Transportation Officials (AASHTO) program, and the American Association for Laboratory Accreditation (A2LA) program. Furnish to the Owner, a copy of the Certificate of Accreditation and Scope of Accreditation. The scope of the laboratory's accreditation shall include the test methods required by the Contract.
- C. Prior to approval of non-accredited laboratories, the proposed testing laboratory facilities and records may be subject to inspection by the Engineer. Records subject to inspection include equipment inventory, equipment calibration dates and procedures, library of test procedures, audit and inspection reports by agencies conducting laboratory evaluations and certifications, testing and management personnel qualifications, test report forms, and the internal QC procedures.
- D. The Owner retains the right to check laboratory equipment in the proposed laboratory and the laboratory technician's testing procedures, techniques, and other items pertinent to testing, for compliance with the standards set forth in this Contract.
- E. Cite applicable Contract requirements, tests or analytical procedures used when reporting test results. Provide actual results and include a statement that the item

tested or analyzed conforms or fails to conform to specified requirements. If the item fails to conform, notify Owner immediately. Conspicuously stamp the cover sheet for each report in large red letters "CONFORMS" or "DOES NOT CONFORM" to the specification requirements, whichever is applicable. Test results shall be signed by a testing laboratory representative authorized to sign certified test reports. Furnish the signed reports, certifications, and other documentation to the Owner. Furnish a summary report of field tests at the end of each month.

- F. The Contractor shall furnish the signed reports, certifications, and a summary report of field tests at the end of each month to the Owner.

1.04 COMPLETION INSPECTIONS

- A. Near the completion of all work or any increment thereof established by a completion time stated elsewhere in the specifications, the Contractor shall conduct an inspection of the work and develop a "punch list" of items which do not conform to the approved drawings and specifications. Include in the punch list any remaining items on the "Rework Items List" which were not corrected prior to the Punch-Out Inspection. The punch list shall include the estimated date by which the deficiencies will be corrected. A copy of the punch list shall be provided to the Owner. The Contractor or staff shall make follow-on inspections to ascertain that all deficiencies have been corrected. Once this is accomplished, the Contractor shall notify the Owner that the facility is ready for the Owner "Pre-Final Inspection."
- B. The Owner will perform a pre-final inspection to verify that the facility is complete and ready to be occupied. An Owner "Pre-Final Punch List" may be developed as a result of this inspection. The Contractor shall ensure that all items on this list are corrected prior to notifying the Owner that a "Final" inspection can be scheduled. Any items noted on the "Pre-Final" inspection shall be corrected in timely manner and shall be accomplished within the time slated for completion of the entire work, or any particular increment thereof if the project is divided into increments by separate completion dates.
- C. The Contractor's Project Manager, the superintendent or other primary contractor management personnel, and the Owner's Representative will be in attendance at the Final Acceptance Inspection. Additional Owner personnel may be in attendance. The final acceptance inspection will be formally scheduled by the Engineer based upon results of the "Pre-Final" inspection. Notice shall be given to the Owner at least 14 days prior to the final inspection stating that all specific items previously identified to the Contractor as being unacceptable, along with all the remaining work performed under the contract, will be complete and acceptable by the date scheduled for the final acceptance inspection.

1.05 DOCUMENTATION

- A. Maintain current and complete records of on-site and off-site QC program operations and activities.
- B. Contractor Production Reports are required for each day that work is performed. Account for each calendar day throughout the life of the Contract. The reporting of work shall be identified by terminology consistent with the construction schedule. Contractor Production Reports are to be prepared, signed and dated by the project superintendent and shall contain the following information:

1. Date of report, report number, name of contractor, Contract number, title and location of Contract and superintendent present.
2. Weather conditions in the morning and in the afternoon including maximum and minimum temperatures.
3. Identify work performed by corresponding Scheduled Activity No., Modification No., etc.
4. A list of Contractor and subcontractor personnel on the work site, their trades, employer, work location, description of work performed, hours worked by trade, daily total work hours on work site, and total work hours from start of construction.
5. A list of job safety actions taken and safety inspections conducted. Indicate that safety requirements have been met including the results on the following:
 - a. Was a job safety meeting held? (If YES, attach a copy of the meeting minutes.)
 - b. Were there any lost time accidents? (If YES, attach a copy of the completed OSHA report.)
 - c. Was crane/trenching/scaffold/high voltage electrical/high work done? (If YES, attach a statement or checklist showing inspection performed.)
 - d. Was hazardous material/waste released into the environment? (If YES, attach a description of meetings held and accidents that happened.)
 - e. List safety actions taken today and safety inspections conducted.
6. A list of equipment/material received each day that is incorporated into the job.
7. A list of construction equipment on the work site including the number of hours used, idle and down for repair.
8. Include a "remarks" section in this report which will contain pertinent information including directions received, problems encountered during construction, work progress and delays, conflicts or errors in the drawings or specifications, field changes, safety hazards encountered, instructions given and corrective actions taken, delays encountered and a record of visitors to the work site.

1.06 NOTIFICATION ON NON-COMPLIANCE

- A. The Owner will notify the Contractor of any detected non-compliance with the foregoing requirements. The Contractor shall take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the work site, shall be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Owner may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders shall be made the subject of claim for extension of time for excess costs or damages by the Contractor.

Not used.

PART II - PRODUCTS

Not used.

PART III - EXECUTION

END OF SECTION 01450

SECTION 01575

TEMPORARY ENVIRONMENTAL CONTROLS

PART I - GENERAL

1.01 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

CODE OF FEDERAL REGULATIONS (CFR)

| | |
|-------------|---|
| 29 CFR 1910 | Occupational Safety and Health Standards |
| 40 CFR 261 | Identification and Listing of Hazardous Waste |
| 40 CFR 262 | Generators of Hazardous Waste |
| 40 CFR 263 | Transporters of Hazardous Waste |
| 40 CFR 264 | Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities |
| 40 CFR 265 | Interim Status Standard for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities |
| 40 CFR 300 | National Oil and Hazardous Substances Pollution Contingency Plan |
| 49 CFR 171 | General Information, Regulations, and Definitions |
| 49 CFR 172 | Hazardous Materials, Tables, and Hazardous Materials Communications Regulations |
| 49 CFR 178 | Shipping Container Specification |

ENVIRONMENTAL PROTECTION AGENCY (EPA)

| | |
|------------------|--|
| EPA 832-R-92-005 | Storm Water Management for Construction Activities |
|------------------|--|

1.02 CONTRACTOR LIABILITIES FOR ENVIRONMENTAL PROTECTION

Contractors shall complete and provide environmental training documentation for training required by Federal, State, and local regulations.

1.03 DEFINITIONS

A. Sediment

Soil and other debris that has eroded and been transported by runoff water or wind.

B. Solid Waste

Rubbish, debris, garbage, and other discarded solid materials, except hazardous waste as defined in paragraph entitled "Hazardous Waste," resulting from industrial, commercial, and agricultural operations and from community activities.

C. Sanitary Wastes

Wastes characterized as domestic sanitary sewage.

D. Rubbish

Combustible and noncombustible wastes such as paper, boxes, glass, crockery, metal, lumber, cans, and bones.

E. Debris

Combustible and noncombustible wastes such as ashes and waste materials resulting from construction or maintenance and repair work, leaves, and tree trimmings.

F. Chemical Wastes

This includes salts, acids, alkalies, herbicides, pesticides, and organic chemicals.

G. Garbage

Refuse and scraps resulting from preparation, cooking, dispensing, and consumption of food.

H. Hazardous Waste

Hazardous substances as defined in 40 CFR 261 or as defined by applicable State and local regulations.

I. Hazardous Materials

Hazardous materials as defined in 49 CFR 171 and listed in 49 CFR 172.

J. Landscape Features

Trees, plants, shrubs, and ground cover.

K. Oily Waste

Petroleum products and bituminous materials.

1.04 SUBMITTALS

Submit the following in accordance with Section entitled "Submittal Procedures."

- A. Pre-construction survey report.
- B. Submit a copy of an approved laboratory analysis of materials collected as a result from abrasive blasting operations before disposing of waste materials.
- C. Submit copies of any State and local permits or licenses for the solid waste disposal facility.
- D. Submit a copy of the applicable EPA and State permits, manifests, or licenses for transportation, treatment, storage, and disposal of hazardous waste by permitted facilities.
- E. Submit one copy of the EPA or State permit license, or regulation for the transporter who will ship the hazardous waste to the permitted Treatment, Storage, and Disposal (TSD) facility.
- F. Submit written certification that hazardous waste turned in for disposal was generated on the Owner's property and is identified, packaged, and labeled in accordance with 40 CFR 261, 40 CFR 262, and 40 CFR 263.

1.05 ENVIRONMENTAL PROTECTION REGULATORY REQUIREMENTS

- A. Provide and maintain, during the life of the contract, environmental protection as defined in this Section. Plan for and provide environmental protective measures to control pollution that develops during normal construction practice. Plan for and provide environmental protective measures required to correct conditions that develop during the construction of permanent or temporary environmental features associated with the project. Comply with Federal, State, and local regulations pertaining to the environment, including but not limited to water, air, solid waste, and noise pollution.

1.06 ENVIRONMENTAL PROTECTION PLAN

- A. Contents of Environmental Protection Plan
 - 1. Include any hazardous materials (HM) planned for use on the job. Submit a list (including quantities) of HM to be brought to the site and copies of the corresponding material safety data sheets (MSDS). Submit this list to the Owner. At project completion, remove any hazardous material brought onto the site. Account for the quantity of HM brought to the site, the quantity used or expended during the job, and the left over quantity which (1) may have additional useful life as a HM and shall be removed by the Contractor, or (2) may be a hazardous waste, which shall then be removed as specified herein.
 - 2. The Environmental Protection Plan shall list and quantify any Hazardous Waste (HW) to be generated during the project.
 - 3. Store HW near the point of generation up to a total quantity of 55 gallons of hazardous waste. Move any volume exceeding these quantities to a HW permitted area within 3 days. Properly label all hazardous waste to be stored in accordance with applicable regulations.
 - 4. Contact Owner for conditions in the area of the project which may be subject to

special environmental procedures. Include this information in the Pre-construction Survey. Describe in the Environmental Protection Plan any permits required prior to working the area, and contingency plans in case an unexpected environmental condition is discovered.

5. Obtain permits for handling HW, and deliver completed documents to Engineer for review. File the documents with the appropriate agency, and complete disposal with the approval of Owner. Deliver correspondence with the State concerning the environmental permits and completed permits to Owner.

B. Environmental Protection Plan Format

The Environmental Protection Plan shall conform to the following format:

ENVIRONMENTAL PROTECTION PLAN

Contractor Organization
Address and Phone Numbers

1. Methods to be used to prevent soil erosion
2. Methods to be used to contain spills of oily waste or debris
3. Methods to be used to control dust
4. Methods to be used for solid waste disposal
5. Hazardous materials to be brought onto the site
6. MSDS package
7. Employee training documentation
8. HW storage plan
9. HW to be generated
10. Pre-construction survey results
11. Permitting requirements identified

- C. Perform a pre-construction survey of the project site with the Engineer, and document existing environmental conditions in and adjacent to the site.

PART II - PRODUCTS

Not used.

PART III - EXECUTION

3.01 PROTECTION OF NATURAL RESOURCES

- A. Preserve the natural resources within the project boundaries and outside the limits of permanent work. Restore to an equivalent or improved condition upon completion of work. Confine construction activities to within the limits of the work indicated or specified. Conform to the national and state permitting requirements of the Clean Water Act.
- B. Prevent oily or other hazardous substances from entering the ground, drainage areas, or local bodies of water. Surround all temporary fuel oil or petroleum storage tanks with a temporary earth berm of sufficient size and strength to contain the

contents of the tanks in the event of leakage or spillage.

- C. Prevent oily substances or other debris from entering the water. Provide a temporary protective floating boom system, complete with associated hardware and anchors, to prevent debris from escaping from the work area. The boom shall totally enclose any active work or storage area. Booms shall have a minimum of 6 inches of freeboard, 12 inches draft, 11 pounds per foot buoyancy and a fabric strength of 13,000 pounds.
- D. Do not disturb fish and wildlife. Do not alter water flows or otherwise significantly disturb the native habitat adjacent to the project and critical to the survival of fish and wildlife, except as indicated or specified.

3.02 NOISE

- A. Make the maximum use of low-noise emission products, as certified by the EPA. Blasting or use of explosives will not be permitted without written permission from the Owner, and then only during designated times. Confine pile-driving operations to the period between 7 a.m. and 4 p.m., Monday through Friday, exclusive of holidays, unless otherwise directed.

3.03 EROSION AND SEDIMENT CONTROL MEASURES

- A. Burn-off of the ground cover is not permitted.
- B. Temporary Protection of Erodible Soils

Use the following methods to prevent erosion and control sedimentation:

1. Mechanically retard and control the rate of runoff from the construction site. This includes construction of diversion ditches, benches, berms, and use of silt fences and straw bales to retard and divert runoff to protected drainage courses.
2. Provide temporary protection on sides and back slopes as soon as rough grading is completed or sufficient soil is exposed to require erosion protection. Protect slopes by accelerated growth of temporary vegetation, mulching, netting or other methods approved by the Engineer.

3.04 CONTROL AND DISPOSAL OF SOLID WASTES

- A. Pick up solid wastes on a daily basis, and place in covered containers that are regularly emptied. Do not prepare or cook food on the project site. Prevent contamination of the site or other areas when handling and disposing of wastes. At project completion, leave the areas clean. Dispose of solid waste generated at locations as directed.
- B. Remove rubbish and debris from Owner property and dispose at a licensed disposal facility off-site.
- C. Place garbage in approved containers, and move to a pickup point or disposal area, where directed.

3.05 CONTROL AND DISPOSAL OF HAZARDOUS WASTE

- A. Handle generated hazardous waste in accordance with 40 CFR 262.
- B. Dispose of hazardous waste in accordance with Federal, State, and local regulations, especially 40 CFR 263, 40 CFR 264, and 40 CFR 265. Removal of hazardous waste from project site shall not occur without prior notification and coordination with the Owner. Transport hazardous waste by a permitted, licensed, or registered hazardous waste transporter to a TSD facility. Hazardous waste shall be properly identified, packaged, and labeled in accordance with 49 CFR 172. Provide completed manifest for hazardous waste disposed of off-site to the Engineer within 7 days of disposal. Hazardous waste shall not be brought onto the site.
- C. Store hazardous waste in containers in accordance with 49 CFR 178. Identify hazardous waste in accordance with 40 CFR 261 and 40 CFR 262. Identify hazardous waste generated within the confines of the site by the site's EPA generator identification number.
- D. Take precautions to prevent spills of oil and hazardous material. In the event of a spill, immediately notify the Owner. Spill response shall be in accordance with 40 CFR 300 and applicable State regulations.
- E. Protect against spills and evaporation during fueling and lubrication of equipment and motor vehicles. Dispose of lubricants and excess oil in accordance with Federal, State, local regulations per 3.05B.

3.06 DUST CONTROL

- A. Keep dust down at all times, including nonworking periods. Sprinkle or treat, with dust suppressants, the soil at the site, haul roads, and other areas disturbed by operations. Dry power brooming will not be permitted. Instead, use vacuuming, wet mopping, wet sweeping, or wet power brooming. Air blowing will be permitted only for cleaning non-particulate debris such as steel reinforcing bars. Only wet cutting will be permitted for cutting concrete blocks, concrete, and bituminous concrete. Do not shake bags of cement, concrete mortar, or plaster unnecessarily.
- B. Abrasive Blasting
 - 1. The use of silica sand is prohibited in abrasive blasting.
 - 2. Provide tarpaulin drop cloths and windscreens to enclose abrasive blasting operations to confine and collect dust, abrasive agent, paint chips, and other. Perform work involving removal of hazardous material in accordance with 29 CFR 1910.
 - 3. Collect dust, abrasive, paint, and other debris resulting from abrasive blasting operations on painted surfaces and store in 55 gallon drums with watertight lids. Take a representative sample of this material, and test for EP toxicity with respect to lead, chromium, and cadmium content. The sampling and testing shall be performed in accordance with 40 CFR 261. Handle debris resulting from the abrasive blasting operations as a hazardous material, and dispose of in accordance with 40 CFR 262, 40 CFR 263, 40 CFR 264, and 40 CFR 265. Transport hazardous material by a transporter licensed and permitted for

transportation of hazardous materials. Dispose of hazardous material in an EPA-approved and permitted facility specifically designated for hazardous waste disposal.

END OF SECTION 01575

SECTION 01700

EXECUTION REQUIREMENTS

PART I - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work specified in this section.

1.02 SUMMARY

- A. This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:
 - 1. Construction Layout.
 - 2. Field engineering and surveying.
 - 3. General installation of products.
 - 4. Progress cleaning.
 - 5. Starting and adjusting.
 - 6. Protection of installed construction.
 - 7. Correction of the Work.
- B. Related Sections include the following:
 - 1. Division 1, Section "Project Management and Coordination" for procedures to coordinate field engineering with other construction activities.
 - 2. Division 1, Section "Submittal Procedures" for submitting surveys.
 - 3. Division 1, Section "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, and final cleaning.

1.03 SUBMITTALS

- A. Qualification Data: For land surveyor to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.
- B. Certificates: Submit certificate signed by land surveyor certifying that locations and elevation of improvements comply with requirements.
- C. Landfill Receipts: Submit copy of receipts issued by a landfill facility, licensed to accept hazardous materials, for hazardous waste disposal.

- D. Certified Surveys: Submit 5 copies signed by land surveyor.
- E. Final Property Survey: Submit 10 copies showing the Work performed and record survey data.

1.04 QUALITY ASSURANCE

- A. Land Surveyor Qualifications: A professional land surveyor who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing land-surveying services of the kind indicated.

PART II – PRODUCTS

Not Used.

PART III – EXECUTION

3.01 IDENTIFICATION

- A. The Contractor will identify existing control points and property line corner stakes.
- B. Verify layout information shown on the Drawings, in relation to the property survey and existing benchmarks, before proceeding to lay out the Work. Locate and protect existing benchmarks and control points. Preserve permanent reference points during construction.
 - 1. Do not change or relocate benchmarks or control points without prior written approval. Promptly report lost or destroyed reference points or requirements to relocate reference points due to necessary changes in grades or locations.
 - 2. Promptly replace lost or destroyed Project control points. Base replacements on the original survey control points.
- C. Establish and maintain a minimum of 2 permanent benchmarks on the site; referenced to data established by survey control points.
- D. Establish and maintain the Layout Baseline with the stationing indicated on the Contract Drawings.

3.02 EXAMINATION

- A. Existing Conditions: The existence and location of previously installed site improvements, utilities, and other construction indicated as existing are not guaranteed. Before beginning

work, investigate and verify the existence and location of all site utility systems and other construction affecting the Work.

1. Before construction, verify the location and connection points of utility services.
- B. Existing Utilities: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning site work, investigate and verify the existence and location of all underground utilities and other construction affecting the Work.
 1. Before construction, verify the location and invert elevation at connection points of sanitary sewer, storm sewer, gas, telecom, water-service piping, irrigation, and underground electrical services.
 2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.

3.03 PREPARATION

- A. Existing Utility Information: Furnish information to Owner's Representative that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.
- B. Existing Utility Interruptions: Do not interrupt utilities services serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
 1. Notify the Owner's Representative not less than 2 days in advance of proposed utility interruptions.
 2. Do not proceed with utility interruptions without Owner's Representative's written permission.
- C. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- D. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- E. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to the Owner's Representative. Include a detailed description of problem encountered, together

with recommendations for changing the Contract Documents. Submit requests on CSI Form 13.2A, "Request for Interpretation" or similar form.

3.04 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Contract Documents in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Owner's Representative immediately.
- B. General: Engage a land surveyor to lay out the Work using accepted surveying practices.
 - 1. Establish benchmarks and control points to set lines and levels at each story of construction and elsewhere as needed to locate each element of Project.
 - 2. Establish dimensions with tolerances indicated. Do not scale Drawings to obtain required dimensions.
 - 3. Inform installers of lines and levels to which they must comply.
 - 4. Check the location, level and plumb, of every major element as the Work progresses.
 - 5. Notify Owner's Representative when deviations from required lines and levels exceed allowable tolerances.
 - 6. Close site surveys with an error of closure less than or equal to the standard established by authorities having jurisdiction.
- C. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and invert elevations.
- D. Building Lines and Levels: Locate and lay out control lines and levels for structures, including those required for mechanical and electrical work. Transfer survey markings and elevations for use with control lines and levels. Level structures from two or more locations.
- E. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by the Engineer.

3.05 FIELD ENGINEERING

- A. Identification: Contractor will identify existing benchmarks, control points, and property corners.

- B. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.
 - 1. Do not change or relocate existing benchmarks or control points without prior written approval of the Owner's Representative. Report lost or destroyed permanent benchmarks or control points promptly. Report the need to relocate permanent benchmarks or control points to the Owner's Representative before proceeding.
 - 2. Replace lost or destroyed permanent benchmarks or control points promptly. Base replacements on the original survey control points.
 - 3. Any required re-calculation and layout plan for an offset baseline shall be provided by the Contractor at no additional cost to the Owner.
- C. Benchmarks: Establish and maintain a minimum of two permanent benchmarks on Project site, referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmark.
 - 1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.
 - 2. Where the actual location or elevation of layout points cannot be marked, provide temporary reference points sufficient to locate the Work.
 - 3. Remove temporary reference points when no longer needed. Restore marked construction to its original condition.
- D. Certified Survey: On completion of substructures, major site improvements, site clearance including debris and/or obstruction removal, controlled fill and horticultural and other work requiring field engineering services, prepare a certified survey showing dimensions, locations, angles, and elevations of construction and sitework.
- E. Final Property Survey: Prepare a final property survey showing significant features (real property) for Project. Include on the survey a certification, signed by land surveyor, that principal lines, and levels of Project are accurately positioned as shown on the survey.
 - 1. Show boundary lines, monuments, streets, site improvements and utilities, existing improvements and significant vegetation, adjoining properties, acreage, grade contours, and the distance and bearing from a site corner to a legal point.
 - 2. Recording: At Substantial Completion, have the final property survey recorded by or with authorities having jurisdiction as the official "property survey".

3.06 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
 - 1. Make vertical work plumb and make horizontal work level.
 - 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- E. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.
- F. Anchors and Fasteners: Provide anchors and fasteners as required to anchor each component securely in place, accurately located and aligned with other portions of the Work.
 - 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by the Owner's Representative.
 - 2. Allow for structure movement, including thermal expansion and contraction.
- G. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- H. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.07 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.
 - 1. Comply with requirements of NFPA 241 for removal of combustible waste materials and debris.

2. Do not hold materials more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80°F (27°C).
 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
- B. Site: Maintain Project site free of waste materials and debris and ensure that no materials enter the adjacent waterway.
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
1. Remove liquid spills promptly.
 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed areas.
- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- G. Cutting and Patching: Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar materials.
1. Thoroughly clean piping, conduit, and similar features before applying paint or other finishing materials. Restore damaged pipe covering to its original condition.
- H. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.
- I. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage, adverse weather conditions or deterioration at Substantial Completion.
- J. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

- K. Limiting Exposures: Supervise construction operations to ensure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.08 STARTING AND ADJUSTING

- A. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
- B. Adjust operating components for proper operation without binding. Adjust equipment for proper operation.
- C. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- D. Manufacturer's Field Service: If a factory-authorized service representative is required to inspect field-assembled components and equipment installation, comply with qualification requirements in Division 1, Section "Quality Control".

3.09 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- B. Comply with manufacturer's written instructions for temperature and relative humidity.

3.10 CORRECTION OF THE WORK

- A. Repair or remove, and replace defective construction. Restore damaged substrates and finishes. Comply with requirements of original construction or installation of Work.
 - 1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
- B. Restore permanent facilities used during construction to their specified condition.
- C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.
- D. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.
- E. Remove and replace chipped, scratched, and broken materials.

END OF SECTION 01700

SECTION 01710

CLEANING

PART I - GENERAL

1.01 DESCRIPTION

- A. Throughout the construction period, maintain the worksites in a standard of cleanliness as described in this Section.
- B. In addition to standards described in this Section, comply with all requirements for cleaning as described in various other Sections of these Specifications.
- C. Maintain premises and public properties free from accumulations of waste, debris, and rubbish caused by operations.
- D. At completion of Work, remove and lawfully dispose of waste materials, rubbish, tools, equipment, machinery, and surplus materials, and clean all sight-exposed surfaces; leave project clean and ready for occupancy.

1.02 QUALITY ASSURANCE

- A. Conduct daily inspections, and more often if necessary, to verify that requirements of cleanliness are being met.
- B. In addition to the standards described in this Section, comply with all pertinent requirements of governmental agencies having jurisdiction.

1.03 SAFETY REQUIREMENTS

- A. Hazards Control
 - 1. Store volatile wastes in covered metal containers, and remove from premises daily.
 - 2. Prevent accumulation of wastes that create hazardous conditions.
 - 3. Provide adequate ventilation during use of volatile or noxious substances.
- B. Conduct cleaning and disposal operations to comply with all applicable ordinances and anti-pollution laws.

PART II - PRODUCTS

- A. Provide all required personnel, equipment, and materials needed to maintain the specified standard of cleanliness.
- B. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.

PART III - EXECUTION

3.01 PROGRESS CLEANING

A. General

1. Retain all stored items in an orderly arrangement allowing maximum access, not impeding drainage or traffic, and providing the required protection of materials.
2. Do not allow the accumulation of scrap, debris, waste material, and other items not required for construction of this Work.
3. Wet down dry materials and rubbish to lay dust and prevent blowing dust.
4. At least once a week and more often if necessary, completely remove all scrap, debris and waste material from the job site.
5. Provide adequate storage for all items awaiting removal from the job site, observing all requirements for fire protection and protection of the environment.
6. Combustible waste, scrap, rubbish, etc., shall be stored in adequately sized metal containers (with metal covers) where practical, pending removal from the premises.

B. Worksites

1. Daily, and more often if necessary, inspect each site and move all scrap, debris and waste material to a place designated for their storage.
2. Weekly, and more often if necessary, inspect all arrangements of materials stored on each site; restack, tidy, or otherwise service all arrangements to meet the above requirements.
3. Maintain each site in a neat and orderly condition at all times.

C. Structures

1. Weekly, and more often if necessary, inspect the new structures and move all scrap, debris, and waste material to designated storage area.

2. As required preparatory to installation of succeeding materials, clean the structures or pertinent portions thereof to the degree of cleanliness recommended by the manufacturer of materials required to achieve the required cleanliness.
3. Handle materials in a controlled manner. Do not drop or throw materials from heights.
4. Schedule cleaning operations so that dust and other contaminants resulting from cleaning process will not fall on wet, newly finished surfaces.

3.02 FINAL CLEANING

- A. Prior to completion of the work, remove from the job site all tools, surplus materials, equipment, scrap, debris and waste.
- B. Employ experienced workmen, or professional cleaners, for final cleaning.
- C. In preparation for substantial completion or occupancy, conduct a final inspection of sight-exposed exterior surfaces, and of any concealed spaces.
- D. Structures
 1. Visually inspect all surfaces and remove all traces of soil, waste material, smudges and other foreign matter. Remove all traces of splashed materials from adjacent surfaces. Remove all paint droppings, spots, stains, and dirt from finished surfaces. Use only the specified cleaning materials and equipment.
 2. Besides the general broom cleaning, the Contractor shall do the following special cleaning for all trades at the completion of the work and before final acceptance:
 - a. Remove all marks, stains, and other soil or dirt from all newly finished surfaces.
 - b. Remove all stains and clean exposed concrete floors.
 - c. Clean and polish all hardware for all trades; this shall include removal of all stains, dust, dirt, paint, etc., upon completion.
 - d. Clean all new fixtures and equipment installed as part of this Contract, removing all stains, paint, dirt and dust.
 - e. Repair and patch marred surfaces to specified finish to match adjacent surfaces.
- E. Final Cleaning: Schedule final cleaning as approved by the Engineer to enable the Owner to accept a completely clean project.

PART IV - METHOD OF MEASUREMENT

No Method of Measurement is required for this Section.

PART V - BASIS OF PAYMENT

There shall be no separate payment for this Section.

END OF SECTION 01710

SECTION 01770

CLOSEOUT PROCEDURES

PART I - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work specified in this section.

1.02 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - 1. Inspection procedures.
 - 2. Project Record Documents.
 - 3. Operation and Maintenance manuals.
 - 4. Warranties.
 - 5. Instruction of Owner's personnel.
 - 6. SD-09 Closeout Submittals.
 - 7. Final cleaning.
- B. Related Sections include the following:
 - 1. Division 1, Section "Construction Progress Documentation" for submitting final documentation.
 - 2. Division 1, Section "Execution Requirements" for progress cleaning of Project site.
 - 3. Divisions 2 through 16, Sections for specific closeout and special cleaning requirements for products of those Sections.

1.03 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspections for determining date of Substantial Completion, complete the following (List items below that are incomplete in request):
 - 1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
 - 2. Advise Owner of pending insurance changeover requirements.
 - 3. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 - 4. Obtain and submit releases permitting Owner unrestricted use of the Work and access to the services and utilities. Include occupancy permits, operating certificates, and similar releases.

5. Prepare and submit Project Record Documents, operation and maintenance manuals, final property surveys, and similar final record information.
 6. Deliver tools, spare parts, extra materials, and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.
 7. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
 8. Complete startup testing of systems.
 9. Submit test/adjust/balance records.
 10. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
 11. Advise Owner of changeover in all utilities.
 12. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
 13. Complete final cleaning requirements, including touchup painting.
 14. Touchup and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- B. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, Engineer and/or Owner's Representative will either proceed with inspection or notify Contractor of unfilled requirements. The Owner's Representative will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by the Owner's Representative that must be completed or corrected before certificate will be issued.
1. Re-inspection: Request re-inspection when the Work identified in previous inspections as incomplete is completed or corrected.
 2. Results of completed inspection will form the basis of requirements for Final Completion.

1.04 FINAL COMPLETION

- A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:
1. Submit a final Application for Payment according to payment procedure.
 2. Submit certified copy of Owner's Representative's endorsed and dated Substantial Completion inspection list of items to be completed or corrected (punch list). The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.

3. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
 4. Submit pest-control final inspection report and warranty.
 5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems. Submit demonstration and training videotapes.
- B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Engineer and/or Owner's Representative will either proceed with inspection or notify Contractor of unfilled requirements. The Owner's Representative will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
1. Re-inspection: Request re-inspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.05 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Preparation: Submit three (3) copies of list. Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction. Use CSI Form 14.1A.
1. Organize list of areas in phases to match construction schedule, starting with the northern areas first and proceeding south.
 2. Organize items applying to each phase of work by major element, including categories for earthwork, utility systems, paving, structures, irrigation, water supply, lighting, planting soils and mixes, and site furnishings.
 3. Include the following information at the top of each page:
 - a. Project Name.
 - b. Date.
 - c. Name of Engineer and Owner's Representative.
 - d. Name of Contractor.
 - e. Page number.

1.06 WARRANTIES

- A. Submittal Time: Submit written warranties on request of Owner's Representative for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.
- B. Partial Occupancy: Submit properly executed warranties within 15 days of completion of designated portions of the Work that are completed and occupied or used by Owner during construction period by separate agreement with Contractor.
- C. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.

1. Bind warranties and bonds in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-½" x 11" paper.
 2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
 3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES", Project name, and name of Contractor.
- D. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART II – PRODUCTS

2.01 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART III – EXECUTION

3.01 FINAL CLEANING

- A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances, and Federal and local environmental and anti-pollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial cleaning and maintenance program. Comply with manufacturer's written instructions.
1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:
 - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
 - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - e. Remove snow and ice to provide safe access along walkways.

- f. Clean exposed hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces.
 - g. Remove debris from limited access spaces, including trenches, equipment vaults, manholes, and similar spaces.
 - h. Remove labels that are not permanent.
 - i. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
 - 1. Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.
 - j. Wipe surfaces of mechanical and electrical equipment and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
 - k. Replace parts subject to unusual operating conditions.
 - l. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency. Replace burned-out bulbs, and those noticeably dimmed by hours of use, and defective fixtures.
 - m. Leave Project clean and ready for occupancy.
- C. Pest Control: Engage an experienced, licensed exterminator to make a final inspection and rid Project of rodents, insects, and other pests. Prepare a report.
- D. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems or waterways. Remove waste materials from Project site and dispose of lawfully.

END OF SECTION 01770

SECTION 02100

SITE WORK GENERAL PROVISIONS

PART I - GENERAL

1.01 SUMMARY OF WORK

- A. Under the applicable Division-2 sections referred to herein, the Contractor shall provide all labor, materials and equipment necessary to perform all site work that is indicated or covered by the Contract Documents.
- B. Site work shall be shown on the site improvement plans, or as specified herein, or as directed by the Owner's Representative. Work shall include, but not be limited to, the following:
 - 1. Earthwork
 - 2. Shoring and Bracing Earthwork
 - 3. Pile Remediation
 - 4. Temporary Environmental Controls
- C. The drawings and General Conditions of the Contract, including General and Supplementary Conditions, apply to work specified in the Division-2 sections indicated herein. The site improvement plans consisting of the following shall be referred to herein as the Site Plan.
 - 1. Site Plan and Sections
- D. Site work shall be accomplished in accordance with the requirements and regulations of the City of New York.
- E. The Contractor shall provide continuous access to the site and shall coordinate work with all other contractors and subcontractors working on the site, adjacent roadway systems, or adjacent properties. The Contractor shall not obstruct access to and from the adjacent properties from the adjacent roadways and driveways.
- F. The Contractor shall provide a safe construction site at all times, and the public shall be protected from unreasonable hazards. Applicable local and/or State requirements shall be observed and necessary permits acquired by the Contractor. The Contractor shall take immediate steps to rectify any hazardous or unsafe condition determined so by the Consultant or the municipal agency having jurisdiction. The Contractor shall conform to the requirements of the municipal agency having jurisdiction; and Industrial Code Rule 23, Protection in Construction, Demolition and Excavation, Operations, of the Rules and Regulations of the State of New York and of Subsection 107-05 "Safety and Health Requirements" of the NYSDOT Standard Specifications.

- G. Throughout the specifications contained herein, reference is made to the requirements of the City of New York and the requirements of the utility having jurisdiction (water, sewer, electric, gas and telephone). When there is a conflict between the referenced specifications, requirements, details, and specifications contained herein, the more stringent requirements shall control, as determined by the Consultant or representative of agency having jurisdiction, as appropriate, shall be final.
- H. The Contractor shall obtain and observe the applicable sections of the following specifications, details and requirements herein referenced. In utilizing referenced Standard Details and Specifications, the Contractor shall conform to requirements governing the work, materials, or project and not the general provisions and other provisions relating to measurement and payment. Standard Specifications, Details, Codes, Requirements, etc., specified herein by reference shall be as binding as if copied verbatim and specified directly herein.
1. The specifications, details and requirements of the City of New York.
 2. "Standard Specifications Construction and Materials, and Details", of the New York State Department of Transportation.
 3. Title 29 Code of Federal Regulations, Part 1926, Safety and Health Regulations for Construction, (OSHA).
 4. Industrial Code Rules of the New York State Department of Labor, Board of Standards and Appeals.
- I. Minimum Standard Reminder: Codes and Standard Specifications listed are minimum standards, and will not relieve the Contractor from carrying out all site work operations in a safe and prudent manner, or from providing a higher quality of material and workmanship. Workmen, the public, and adjacent property shall be protected from unreasonable hazard, and, the work shall be satisfactorily completed without causing damage to adjacent ground and structures.
- J. Conformance to the requirements herein does not relieve the Contractor from implementing additional measures or providing additional materials, work, equipment, personnel, etc., necessary to ensure a safe construction site and protection of existing facilities. The Contractor is placed on notice that safety during construction is considered as important as the construction itself. The Contractor shall, therefore, at all times conduct his operations in a manner to ensure that conditions on the site are adequate and effective for safety; and, to insure the convenience of abutting property, Owners and their safety as well as the safety of his own employees.
- K. Emergency Contact Person: The Contractor shall designate someone to be available to respond to emergency calls. The name of the person and the telephone number at which he/she can be reached at any time shall be given to the Consultant, Owner and all police

agencies in the area. Such person shall have full authority and capability to mobilize forces promptly as required to respond to an emergency and protect the public.

- L. The work barges must be moored independently of the pier structures either by mooring piles (spuds) or anchors which must conform to USCG requirements.

1.02 PERMITS AND BONDS

- A. Permits and Bonds: Purchase and submit copies of permits and bonds necessary in connection with the performance of the Work specified in this section. At the job site, post notices and copies of permits necessary for the proper and lawful performance of the work, in accordance with such permits.

END OF SECTION 02100

SECTION 02270

EROSION AND SEDIMENT CONTROL

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Work of this Section includes all labor, materials, equipment and services necessary to complete the temporary erosion control measures as shown on the Drawings or as ordered by the Engineer and/or Construction Manager or Engineer during the life of the Contract.

The Contractor shall provide and maintain temporary vegetation of all areas disturbed by construction.

B. Vegetative Measures

1. Topsoil
2. Mulching

C. Temporary Structural Measures

1. Earth Dike
2. Temporary Swale
3. Perimeter Dike/Swale
4. Temporary Storm Drain Diversion
5. Pipe Slope Drain
6. Straw Bale Dike
7. Silt Fence
8. Storm Drain Inlet Protection
9. Sediment Trap
10. Portable Sediment Tank
11. Sediment Basin
12. Stabilized Construction Entrance
13. Construction Road Stabilization
14. Dust Control
15. Sump Pit

1.2 RELATED WORK

- | | | |
|----|------------------------------------|---------------|
| 1. | Temporary Environmental Controls | Section 01575 |
| 2. | Cleaning | Section 01710 |
| 3. | Site Work General Provisions | Section 02100 |
| 4. | Concrete Pile Jacketing & Grouting | Section 03310 |

1.3 QUALITY ASSURANCE

- A. The Contractor shall perform all operations in accordance with the rules, regulations and ordinances of those governing bodies having jurisdiction.
- B. NYSDEC General Permit GP-02-01
1. The project will be subject to the New York State Department of Environmental Conservation (NYSDEC) SPDES General Permit for Stormwater Discharges from Construction Activity, Permit No. GP-02-01. The Owner will file a Notice of Intent (NOI) with the NYSDEC in accordance with the General Permit.
 2. A Storm Water Pollution Prevention Plan has been prepared in accordance with the SPDES General Permit. The SWPPP is a part of the Contract Documents and the Contractor shall conform to the Chapter on Soil Erosion and Sediment Control in addition to the requirements of this Specification.
 3. The Contractor(s) and Subcontractor(s) will be responsible for implementing all sediment control measures during construction. All contractors and subcontractors that will be performing excavations on the site must sign a copy of the certification statement before undertaking any construction or activity at the site. The certification must include the name and title of the person providing the signature; the name, address and telephone number of the contracting firm; the address (or other identifying description) of the site; and the date the certification was made.

Contractor Certification Statement

"I certify under penalty of law that I understand and agree to comply with the terms and conditions of the Storm Water Pollution Prevention Plan (SWPPP) for the construction site identified in such SWPPP as a condition of authorization to discharge stormwater. I also understand that the operator must comply with the terms and conditions of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards."

4. In the event of conflict between the requirements of these Project Specifications and the pollution control laws, rules or regulations of Federal, State or Local agencies, the more restrictive laws, rules or regulations shall govern.
5. In accordance with the NYSDEC General Permit, the project is limited to a

maximum disturbed area of 5.0 acres. The Contractor may alter the construction sequence only with prior approval by the Engineer. Areas covered with gravel, building sub-base material or temporary emulsion or stabilization shall be considered as stabilized.

6. Temporary stabilization must be maintained at all times. The Contractor is responsible for maintaining records to insure the 5 acre disturbance limit is met.
7. Providing and maintaining all temporary stabilization to meet the NYSDEC requirements shall be included in the Contract price. The Contractor shall maintain throughout the entire construction contract.

1.4 SUBMITTALS

- A. Submit shop drawings in accordance with Section 01330-Submittals.
- B. Manufacturers specifications and other data required to demonstrate compliance with specific requirements of this Section.

1.5 DELIVERY, STORAGE & HANDLING (NOT USED)

1.6 JOB CONDITIONS

- A. The Contractor shall provide all necessary safeguards as may be required to prevent damage to property beyond the Work area or adjacent property.
- B. Area of Work
 1. In accordance with the NYSDEC General Permit, the project is limited to a maximum disturbed area of 5.0 acres. The Contractor may alter the construction sequence only with prior approval by the engineer. Areas covered with gravel, building sub-base material or temporary emulsion or stabilization shall be considered as stabilized.
 2. The Construction Manger or Engineer shall have the authority to increase or decrease the surface area of erodible earth material exposed by clearing and grubbing, and/or excavation and fill operations, and to direct the Contractor to provide immediate permanent or temporary pollution control measures to prevent contamination of adjacent streams or other watercourses, lakes, ponds or other areas of water impoundment.
- C. Temporary Erosion Control Measures
 3. Temporary erosion control measures shall be used to correct conditions that develop during construction that are needed prior to installation of permanent control features, or that are temporarily needed to control erosion that develops during normal construction practices, but which are not associated with permanent control features on the Project. All slopes and stockpile areas that will remain undisturbed and/or not top-soiled and seeded for a period of fourteen (14) days shall be temporarily seeded as specified on Drawings.
- D. Permanent Erosion Control Measures

4. The Contractor shall incorporate all permanent erosion control features into the Project at the earliest practical time as outlined in the Project Schedule.

PART 2 – PRODUCTS

2.1 GENERAL

- A. All materials shall be in accordance with the items specified on the Drawings and/or contained in the "New York Guidelines for Urban Erosion and Sediment Control", August 2005.

2.2 SILT FENCE

- A. Fence post shall be at least 36 inches long. Wood posts shall be of hardwood with a minimum cross section area of 4 inches. Steel posts shall be standard "T" or "U" sections and should weigh no less than one (1) pound per linear foot.
- B. Additional support shall be provided by a woven wire fence. Woven wire fence shall be at least 14-gauge with 2" x 4" openings. Plastic netting may be used in lieu of woven wire fence. The plastic netting shall be sewn on top of the geotextile filter fabric. Plastic netting shall have the following minimum properties.

| Netting Property | Minimum Acceptable Value |
|---------------------------|--------------------------|
| Tensile Strength (lbs/ft) | 185 |
| Elongation (%) | 11 |

- C. The geotextile filter fabric shall have the following minimum material properties.

| Geotextile Property | Minimum Acceptable Value | Test Method |
|---------------------------------|--------------------------|-----------------------|
| Grab Tensile Strength (lbs) | 90 | ASTM D1682 |
| Elongation at Failure (%) | 50 | ASTM D1682 |
| Mullen Burst Strength (psi) | 190 | ASTM D3786 |
| Puncture Strength (lbs) | 40 | ASTM D751(mod) |
| Slurry Flow Rate (gal/min/sf) | 0.3 | |
| Apparent Opening Size (AOS) | 40-80 | US Std Sieve CW-02215 |
| Ultraviolet Radiation Stability | 90 | ASTM G26 |

2.3 STABILIZED CONSTRUCTION ENTRANCE

- A. The geotextile filter fabric shall have the following minimum material properties.

| Geotextile Property | Minimum Acceptable Value | Test Method |
|-----------------------------|--------------------------|-----------------------|
| Grab Tensile Strength (lbs) | 200 | ASTM D1682 |
| Elongation at Failure (%) | 50 | ASTM D1682 |
| Mullen Burst Strength (psi) | 190 | ASTM D3786 |
| Puncture Strength (lbs) | 40 | ASTM D751(mod) |
| Apparent Opening Size (AOS) | 40-80 | US Std Sieve CW-02215 |

- B. Stone size shall be a minimum of two (2) inches conforming to AASHTO M-43, Size no. 1.

2.4 DUST CONTROL

- A. Spray adhesives for use on mineral soils shall be as specified in the Table below.

| Material | Water Dilution | Type of Nozzle | Apply Gallons/Acre |
|--|---|----------------|--------------------|
| Acrylic Polymer | 7:1 | Course Spray | 500 |
| Latex Emulsion | 12.5:1 | Fine Spray | 235 |
| Resin in Water | 4:1 | Fine Spray | 300 |
| Polyacrylamide (PAM) Spray on or Dry Spread | Apply according to manufacturer's instructions. | | |
| Acidulated soy bean soap stick | None | Course Spray | 1200 |

- B. Tillage- to roughen surface and bring clods to the surface. This is a temporary emergency measure which should be used before soil blowing starts. Begin plowing on windward side of site. Chisel-type plows spaced about 12 inches apart, and spring-toothed harrows are examples of equipment which may produce the desired effect.
- C. Sprinkling - site is sprinkled until the surface is wet.
- D. Barriers - solid board fences, snow fences, burlap fences, crate walls, bales of hay, and similar material can be used to control air currents and soil blowing.
- E. Calcium chloride- shall be in the form of loose, dry granules or flakes fine enough to feed through commonly used spreaders at a rate that will keep surface moist but not cause pollution or plant damage. If used on steeper slopes, then use other practices to prevent washing into streams, or accumulation around plants.
- F. Stone – shall be crushed stone or coarse gravel conforming to AASHTO M-43, Size no. 57.

2.5 MULCH

- A. Mulch Materials

| Material | Quality Standard | Application Rate per 1,000 s.f. | Depth of application |
|----------------------------------|---|------------------------------------|---|
| Small Grain Straw | Air dried; free of undesirable seeds and coarse material | 90 to 100 lbs. | Cover about 90% of surface |
| Wood chips or Shavings | Green or air dried; free of objectionable coarse material | 500 to 900 lbs | -- |
| Jute Twisted Yarn | Undyed, unbleached plain weave. Warp 78 ends per yd. Weft 41 ends per yd. 60-90 lbs/roll | 48" x 50 yards 48" x 75 yards | -- |
| Gravel, crushed stone or slag | Washed: AASHTO M-43, Size no. 2. AASHTO M-43, Size no. 3. | 9 cubic yards | Use Size no. 3 where subject to traffic |

1. Alternate mulch materials as described in the "New York Guidelines for Urban Erosion and Sediment Control", August 2005 may be utilized with prior written approval of the Engineer.

A. Mulch Anchoring

1. Mulch anchoring should be accomplished immediately after placement to minimize loss by wind or water. Anchoring may be done by one of the following methods, depending upon the size of the area, steepness of slopes, and costs.
2. Peg and Twine - Drive 8 to 10 inch wooden pegs to within 2 to 3 inches of the soil surface every 4 feet in all directions. Stakes may be driven before or after applying mulch. Secure mulch to soil surface by stretching twine between pegs in a criss-cross and a square pattern. Secure twine around each peg with two or more round turns.
3. Mulch Nettings - Staple the light weight paper, jute, cotton, or plastic nettings to the soil surface. Mulch netting shall be biodegradable.
4. Crimper (mulch anchoring tool) - A tractor-drawn implement, somewhat like a disc-harrow especially designed to push or cut some of the broadcast long fiber mulch 3 to 4 inches into the soil so as to anchor it and leave part standing upright. This technique is limited to areas traversable by a tractor, which must operate on the contour of slopes. Straw mulch rate must be 3 tons per acre. No tackifying or adhesive agent is required.
5. Liquid Mulch-Binders - May be used to anchor salt hay or straw mulches.
 - a. Applications should be heavier at edges where wind catches the mulch, in valleys, and at crests or banks. Remainder of area should be uniform in appearance.
 - b. Use one of the following:
 - 1) Emulsified asphalt - (SS-I, CSS-I, CMS-2, MS-2, RS-I, RS-2, CRS-I, and CRS-2). Apply 0.04 gallons per sq. yd. or 194 gallons per acre on flat slopes less than 8 feet high. On slopes 8 feet high or more use 0.075 gallons per sq. yd. or 363 gallons per acre.
 - 2) Cutback asphalt - rapid curing (RC-70, RC-250, and RC-800) or medium curing (MC-250 or MC-800). Apply 0.04 gallons per sq. yd. or 194 gallons per acre on flat areas and on slopes less than 8 feet high. On slopes 8 feet or more high, use 0.075 gallons per sq. yd. or 363 gallons per acre.
 - 3) Synthetic or Organic binders - binders such as Curasol, DCA-70, Petro-set and Terra-Tack, or equal, may be used at rates recommended by the manufacturer to anchor mulch materials.

PART 3 - EXECUTION

3.1 INSPECTION

- A. The Owner will retain an engineer to conduct on-site inspections every 7 days and within 24 hours of 0.5 inches or greater of rainfall for general compliance with the SWPPP and the General Permit. Inspection reports will be provided to the Owner and Contractor within 24 hours of the field inspection. Any problem areas or areas in need of additional stabilization will require immediate attention and correction by the Contractor.
- B. Examine the areas and conditions where Erosion Control Measures are to be installed and notify the Construction Manager or Engineer of conditions detrimental to the proper and timely completion of the Work. Do not proceed with the Work until unsatisfactory conditions have been corrected by the Contractor in a manner acceptable to the Construction Manager or Engineer.

3.2 GENERAL REQUIREMENTS

- A. The Contractor shall conduct his operations to minimize erosion of soils and to prevent silting and muddying of streams, rivers, irrigation systems, impoundments (lakes, reservoirs, etc.) and lands adjacent to or affected by the Work, in accordance with the approved Sequence of Construction, Drawings and these Project Specifications.
- B. Construction of drainage facilities and performance of other Work that will contribute to the control of erosion and sedimentation shall be carried out in conjunction with earthwork operations or as soon thereafter as practical.
- C. Where erosion is likely to be a problem, clearing and grubbing operations shall be scheduled so that grading operations and permanent erosion control features can follow immediately thereafter, if the Project conditions permit; otherwise, temporary erosion control measures may be required between successive construction stages. The area of bare soil exposed at any one time by construction operations shall be kept to a minimum.
- D. Throughout all operations covered by this Section, the Contractor shall provide all necessary measures to control dust through the use of water, calcium chloride or other material in accordance with the approval of the Construction Manager or Engineer, at such locations and during such periods as he may direct, or as may be required by Local Ordinance or Authorities.

3.3 TEMPORARY EROSION CONTROL MEASURES

- A. Temporary erosion control measures shall be used to correct conditions that develop during construction that are needed prior to installation of permanent control features, or that are temporarily needed to control erosion that develops during normal construction practices, but which are not associated with permanent control features on the Project.
- B. The Contractor shall install all temporary sediment and erosion control measures in accordance with the Details and as described herein.

3.4 DUST CONTROL

- A. Throughout all operations covered by this Section of the Project Specifications, the Contractor shall provide all necessary measures to control dust through the use of water, resin-in-water emulsion or other material in accordance with the approval of the Construction Manager or Engineer, at such locations and during such periods as he may direct, or as may be required by Local Ordinance or Authorities.

- B. Any disturbed areas that are left exposed more than 14 days, and are not subject to construction traffic, will immediately receive a temporary seeding. If the season prevents the establishment of a temporary cover, the disturbed areas will be mulched with straw or equivalent material.
- C. Application of spray-on adhesive (resin-in-water emulsion) shall be applied at a rate of 300 gallons per acre. The resin-in-water emulsion shall be diluted at a ratio of 4:1 and shall be applied with a fine spray nozzle. The treated soil shall not be used for travel.
- D. Watering equipment shall consist of pipelines, tanks, tank trucks or other approved devices capable of applying a uniform spread of water over the surface. A suitable device for regulating the flow and positive shut-off of the water shall be provided for positive control by the operator.
- E. The Construction Manager or Engineer will advise the Contractor of any unsatisfactory procedures for dust control. If the unsatisfactory procedures are not corrected promptly, the Construction Manager or Engineer may suspend the performance of any or all construction until the condition has been corrected.

3.5 TEMPORARY SEEDING

- A. Fertilizer shall be applied at the rate of 14 lbs. per 1000 square foot or 600 lbs. per acre, using 5-10-10 or equivalent.
- B. Annual ryegrass shall be applied at the rate of 30 lbs. per acre, or other select mixture described in the standards.
- C. Small grain straw mulch shall be applied at a rate of 90 lbs. per 1000 square foot or 2 tons per acre, to be applied and anchored according to the standards.
- D. All slopes and stockpile areas that will remain undisturbed and/or not topsoiled and seeded for a period of fourteen (14) days shall be temporarily seeded as specified on Drawings.

3.6 SEDIMENTS AND POLLUTANTS

- A. Water from operations containing sediment shall be treated by filtration, settling basins or other approved means sufficient to reduce the sediment content to no more than that of the stream into which it is discharged.
- B. Pollutants such as fuels, lubricants, bitumens, raw sewage and other harmful materials shall not be discharged into or near rivers, streams, and impoundments or into natural or manmade channels leading thereto. Wash water or waste from concrete mixing operations shall not be allowed to enter live streams.

3.7 PERMANENT EROSION CONTROL MEASURES

- A. The Contractor shall incorporate permanent erosion control features into the Project at the earliest practical time as outlined in his accepted schedule.
- B. No area shall receive permanent seeding prior to approval by the Construction Manager or Engineer.

3.8 CONCRETE WASTE

- A. Discharge of excess or waste concrete and/or wash water from Concrete Ready-Mix Trucks will be allowed on the construction site, but only in specifically designated diked areas that have been prepared to prevent contact between the concrete and/or wash water and storm water that will be discharged from the site or in locations where waste concrete can be placed into forms to make riprap or other useful concrete products. The cured residue from the concrete washout diked areas shall be disposed in accordance with applicable state and federal regulations. The Contractor is responsible for assuring that these procedures are followed.

3.9 TEMPORARY FUEL TANKS

- A. Temporary on-site fuel tanks for construction vehicles shall meet all state and federal regulations. Tanks shall have approved spill containment with the capacity required by the applicable regulations. The tank shall be in sound condition free of rust or other damage that might compromise containment. Hoses, valves, fittings, caps, filler nozzles, and associated hardware shall be maintained in proper working condition at all times.

END OF SECTION 02270

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SECTION 03310

CONCRETE PILE JACKETING AND GROUTING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

All provisions of the Contract, including General and Supplementary Conditions and General Requirements, apply to the work specified in this section.

1.02 SUMMARY

- A. The work covered by this section consists of furnishing all supervision, labor, materials, testing and equipment necessary to install a pile jacketing and grouting system to repair and/or protect concrete piles as hereinafter specified and detailed on the Contract Drawings.
 - 1. Install a permanent outer jacket of durable, inert and corrosion-free material, and fill the annular space between the pile and the permanent jacket with a hydro-ester pourable epoxy grout.
- B. Location and quantity of piles to be repaired and/or protected shall be as specified on the Contract Drawings.
- C. Related Sections include the following:
 - 1. Division 1 – Section “Submittal Procedures” for procedures and other submittal criteria.

1.03 DESCRIPTION OF WORK:

- A. The extent of work is shown on drawings.
- B. The work shall include but is not limited to the following:
 - 1. Cleaning and preparation of existing concrete.
 - 2. Excavation of soil and riprap.
 - 3. Installation of reinforcement, as necessary.
 - 4. Design and installation of formwork and seals.
 - 5. Mixing the epoxy.
 - 6. Injecting the epoxy.
 - 7. Replacing riprap.
- C. Work not included:

1. Field inspection and testing.

1.04 QUALITY ASSURANCE

A. General:

1. Insofar as possible, all materials and equipment used in the installation of this work shall be of the same brand or manufacturer throughout for each class of material and/or equipment.
2. Use numbers of skilled workers equal to work requirement or occasion. The skilled workers shall be thoroughly trained and experienced in the necessary crafts and shall be completely familiar with the specified requirements and methods needed for proper performance of the Work in this Section.

B. Manufacturer's Qualifications: Firms regularly engaged in the manufacture of pile protection systems of the type, material, and sizes required, whose products have been in satisfactory use in similar service for not less than seven years.

C. Installer's Qualifications: A firm with at least five years of successful installation experience on projects with work of installing pile protection systems similar to that required for this Work.

D. The Contractor shall establish, to the satisfaction of the Engineer, that the planning for grouting and the actual placement of the mixed epoxy grout system is performed by experienced personnel.

1.05 SUBMITTALS

A. Refer to and comply with Division 1 - Section "Submittal Procedures", for procedures and other submittal criteria.

B. Product Data:

1. Prior to the start of any work, the Contractor shall submit to the Engineer for approval a list of all materials and equipment specified or otherwise required to complete the Work of this Section.
2. Submit manufacturer's technical product data, including specifications and installation instructions, on the jacketing forms to be used, to show compliance with the Contract Documents, including a drawing which shows method of support, spacing and stabilization of formwork.
3. Manufacturer's specifications on the pumping equipment used to place the epoxy grout.
4. Supplier's technical product data, including specifications and installation instructions for the epoxy grout.

C. Production schedule for placing pile jacket forms, and when pumping the epoxy grout on a daily basis for the duration of the Project.

D. Shop Drawings, detailing at a minimum location of standoff spacers, formwork and bracing details, and bottom seal details, proposed method of installation shall be

prepared by the contractor and submitted for approval prior to any field installation.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Deliver the specified products in original, unopened containers with the manufacturer's name, labels, product identification, and batch numbers. Damaged or contaminated materials shall be removed from the site immediately, at Contractor's expense.
- B. Store pile jackets, epoxy grout, binders and accessories together until use as recommended by the manufacturer.
- C. Protect pile jackets, epoxy grout, binders and accessories from damage, dirt, dampness and direct sunlight during storage.
- D. Handle all pile protection system components in accordance with manufacturer's written instructions.

1.07 JOB CONDITIONS

- A. Environmental Conditions: Do not apply material if ambient surface temperature or water temperature is below manufacturer's minimum application temperature.
- B. Protection: Precautions should be taken to avoid damage to any surface near the work zone due to mixing and handling of the materials. Contractor shall restore any damage incurred to the work zone at his own expense.

PART 2 – PRODUCTS

2.01 MANUFACTURERS

- A. Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1. Sika US, Sika Corporation, 201 Polito Ave, Lindhurst NJ 07071
Phone: 800-933-7452
 - 2. Fox Industries Inc., 3100 Falls Cliff Road, Baltimore, MD 21211
Phone: 888-760-0369; www.fox-ind.com
 - 3. 5 Star Marine, 750 Commerce Drive, Fairfield CT 06825,
Phone: 800-338-3145; www.5star-marine.com
 - 4. Denso North America, 9747 Whithorn Drive, Houston Texas 77095
- B. Core Plug Cement: Where applicable, the following products may be incorporated into the Work include, but are not limited to, the following:
 - 1. Speed Crete Blue Line by The Euclid Company.
 - 2. High strength underwater curing cement from those manufacturers listed in the previous section.

2.02 MATERIALS

1. EPOXY RESIN ADHESIVE FOR EPOXY INJECTION

- A. The epoxy resin adhesive shall be a 2-component, solvent-free, moisture-insensitive, epoxy adhesive of low viscosity and high strength, formulated specifically for injecting into the annulus of submerged formwork, around a concrete pile, up to one inch thick. It shall meet ASTM C 881 Type I, Grade B and C.

B. PROPERTIES OF THE CURED MATERIAL

1. Compressive Properties (ASTM D-695) at 28 days

- a. Compressive Strength 8,000 psi min.

2. Tensile Properties (ASTM D-638) at 14 days

- a. Tensile Strength 7,000 psi min.
b. Elongation at Break 4-5%

3. Flexural Properties (ASTM D-790) at 14 days

- a. Modulus of Rupture 12,000 psi min.

4. Shear Strength (ASTM D-732) at 14 days 4,500 psi min.

5. Total Water Absorption (ASTM D-570) at 7 days 1.5% max. (2 hours boil)

6. Bond Strength (ASTM C-882) Hardened Concrete to Hardened Concrete

- a. 2 day (dry cure) 2,400 psi min.
b. 14 day (moist cure) 2,300 psi min.

2. Jackets

1. Jackets shall be inert and corrosion-free, with an interlocking joint, and fabricated from fiberglass and polyester resins to a minimum thickness of 1/8" unless otherwise shown on the Contract Drawings.

2. Jackets shall meet the following material properties:

- a. Water Absorption (ASTM D570) 1% max.
b. Ultimate Tensile Strength (ASTM D638)
Longitudinal, transverse and diagonal 15,000 psi
c. Flexural Strength (ASTM D796) 25,000 psi
d. Flexural Modulus of Elasticity (ASTM D790) 700,000 psi
min.
e. Barcol Hardness (ASTM D2583) 45+5
f. Color: Translucent

3. The inside face of the jacket shall be textured similar to that of a sandblasted surface and contain no bond-inhibiting agents that contact the hydro-ester epoxy grouts.
4. The jackets shall be provided with non-corrosive “standoffs”, which will secure the jackets in the required positions.
5. Jackets shall be capable of being opened, in order to encapsulate the pile, and then returned to its original shape without damage.
6. Jackets shall be equipped with a compressible sealing strip at the bottom, which will effectively seal the bottom of the annular space between the pile and jacket.

A. Trowel Grade Epoxy Grout

1. Trowel grade epoxy grout shall be composed of a binder and filler meeting the following:
 - a. Epoxy Binder: The binder shall be a two component (2:1 ratio) trowel grade hydro-ester epoxy that is moisture insensitive for applications both above and below water that adheres to wet concrete, steel and pile jackets.
 - b. Filler: The filler shall be kiln-dried silica sand consisting of natural sand having a fineness modulus of between 2.40 and 3.0. Fifteen (15) to thirty (30) percent should pass the No. 50 screen and five (5) to ten (10) percent should pass the No. 100 screen. The sand shall be sharp, hard and strong and shall be free from adherent coating, salt, clay, loam, alkali, organic material or other deleterious substances.
2. Mixing
 - a. The binder and filler shall be mechanically mixed in strict accordance with the manufacturer’s instructions to (1) part binder combined with a maximum (1) part filler.
 - b. When mixed in the ratio of (1) part binder to (1) part filler by volume, the minimum compressive strength of two inch cubes at 7 days, at a 66 to 74 deg. F curing temperature, shall be 8000 psi when tested in accordance with ASTM C579 Method B.

B. Concrete:

1. All concrete work shall conform to requirements of the ACI building codes requirement for structural concrete.
2. Concrete shall meet the following requirements:
 - a. All concrete shall be air entrained, $6\% \pm 1.5\%$ by volume, for 3/8” pea gravel aggregate. No carbonaceous aggregates shall be used.
 - b. All concrete mix shall be mixed, transported and placed in accordance with ACI standards 318 and 304.

- c. Follow ACI standard 211.1 for mixing water requirements.
- d. All concrete shall have compressive strength $F_c' = 5,000$ psi at 28 days with a maximum w/c ratio of 0.40 unless otherwise noted.
- e. Maximum concrete slump shall be 4", prior to the addition of plasticizing admixtures.
- f. Test cylinders shall be taken from the mixer in accordance with ASTM C172 and the project specifications.
- g. Construction joints shall be no more than 40 ft on center, unless otherwise noted.
- h. Concrete shall have 5.4 gal/cy of corrosion inhibitor.

C. Reinforcing:

- 1. Concrete cover measured to the face of the reinforcing bar (including ties and stirrups) shall be 3" unless otherwise indicated in the Drawings.
- 2. All splice lengths shall be greater than or equal to $36 \times$ reinforcing bar diameter for #6 bars and smaller. All splice lengths shall be greater than or equal to $45 \times$ reinforcing bar diameter for #7 bars and larger.
- 3. All reinforcing bars shall be new billet steel conforming to ASTM A615, grade 60.
- 4. All welded wire mesh shall conform to ASTM 185.
- 5. All reinforcing bars and welded wire mesh shall be epoxy coated in conformance with ASTM A775.

PART 3 - APPROVALS

3.01 ACCEPTABLE PRODUCTS:

Epoxy Injection:

- A. Sikadur 35, Hi-Mod LV LPL, as manufactured by Sika Corporation, Lyndhurst, New Jersey, is considered to conform to the requirements of this specification for pile encapsulation and restoration.
- B. Kaufman SurePox HMLV, as manufactured by Kaufman Products, Baltimore, Maryland, is considered to conform to the requirements of this specification for pile encapsulation and restoration. The Contractor is to ensure the appropriate class of product is used depending on the ambient air, water and substrate temperatures.

Epoxy Handpack:

- A. Sikadur 32, Hi-Mod epoxy grout, as manufactured by Sika Corporation, Lyndhurst, New Jersey, is considered to conform to the requirements of this specification for pile encapsulation and restoration.
- B. Kaufman SurePoxy HMLV, as manufactured by Kaufman Products, Baltimore, Maryland, is considered to conform to the requirements of this specification for pile encapsulation and restoration. The Contractor is to ensure the appropriate class of product is used depending on the ambient air, water and substrate temperatures.

Fiber Reinforced Polymer (FRP) Jackets:

- A. FX-70, pile protection system, as manufactured by Fox Industries Incorporated, Baltimore, Maryland, is considered to conform to the requirements of this specification for pile encapsulation and restoration.
- B. PileForm F FRP pile protection system, as manufactured by Five Star Marine, Inc. Fairfield, Connecticut, is considered to conform to the requirements of this specification for pile encapsulation and restoration.

Variations from materials specified - Should the Contractor wish to use any brand or type of material other than as specified herein, he shall so state in writing to the Engineer naming the proposed substitution and manufacturer. This statement shall be accomplished by (a) A certificate of compliance with test results from an approved independent testing laboratory that the proposed substitute meets or exceeds the specified requirements and has been tested in accordance with the specified test standards; (b) Documented proof that the proposed brand or type of material has a proven record of performance when used in the intended application as confirmed by successful installations in place a minimum of ten years, which the Engineer can verify; (c) Certification that the components are supplied by the same manufacturer so as to insure compatibility of material and to maintain single-source manufacturer responsibility.

PART 4 - EXECUTION

4.01 SURFACE PREPARATION

The contractor shall provide all labor, material, equipment and supervision necessary to clean the piles and the bottom surface of the pile caps in the areas to be jacketed, as required by the work and specified hereunder. The work shall include, but not be limited to, the following for each pile to be jacketed.

- A. All concrete pile surfaces to be covered with pile jackets shall be thoroughly cleaned of all marine growth, loose and unsound concrete, or any other deleterious material that would prevent proper bonding, as determined by the Engineer.
- B. The underside of the concrete pile cap shall be similarly cleaned of all marine growth, loose and deteriorated concrete, incipient spalls, etc.
- C. All exposed steel reinforcement shall be cleaned of all rust and scale prior to installation of the pile jacket.
- D. The cleaning operation shall result in a clean sound surface, free from materials that would inhibit bonding of the placed grout system to the existing concrete

pile or cap surface. Cleaned piles must be encased with the protective grout/concrete system within three days to preclude new marine growth or contamination, or cleaning must be repeated.

- E. The extent of cleaning shall be limited to comply with the heretofore requirements, without reducing or compromising the structural integrity of the piles and pile caps.
- F. Cleaning of concrete may be accomplished by mechanical scalers, hand tools, high-pressure water jet, abrasive blasting, or other approved methods that will yield the desired result.
- G. Placement of pile jackets will not be permitted until the concrete surfaces are cleaned to the satisfaction of the Engineer.

4.02 JACKET PLACEMENT

The Contractor shall provide all labor, materials, equipment and supervision necessary to furnish, install and support the jackets as shown on the drawings and specified below. Contractor shall remove any obstructions that impede jacket placement without damaging piles or cap beams.

- A. Prior to installing jackets, place trowel grade epoxy into female portion of joint, spread jacket open and place around pile, and then allow jacket to return to its original shape to engage the interlocking joint.
- B. Install self-drilling, self-tapping stainless steel screws, and center and position jacket to the proper elevation. Provide timber wedges and bracing as required to prevent movement due to tidal and wave action prior to and during grout placement.
- C. The inside of the jacket shall be roughened to ensure adhesion of the repair material.

4.03 GROUT PLACEMENT

- A. The epoxy grout shall be injected, at equal pressures, into the lower ports at the bottom of the pile jacket. The grout shall be continuously injected until the grout reaches the top injection port of the jacket.
- B. The Contractor, at his option, may install multiple levels of grout ports to minimize the pumping pressures. If this option is selected, inject grout first at the lowest grout port. As the grout appears at the next higher port level, and it has been determined that the space between the pile and the jacket is filled to that level, cap the lower port and continue injecting grout through the next higher open port. Repeat this process from port level to port level until the grout reaches the top of the jacket. Ports must be on alternating faces of the pile.
- C. The injection process shall be continuous, except when briefly interrupted to relocate the injector to the next higher port. During grout placement, the injection flow rate shall be controlled to prevent air and/or water entrapment within the pile jacket cavity. A constant tremie must be maintained.
- D. Remove any bracing materials after completion of grout injection and clean jacket exterior of any excess grout or other extraneous material.

- E. Mixing and pumping equipment approved by the Engineer shall be used in preparation and handling of the grout. All oil and other rust inhibitors shall be removed from the mixing drums, stirring mechanisms and other portions of the equipment in contact with the grout before the mixers are used.
- F. All materials shall be accurately measured by volume or weight as they are fed into the mixer. The quantity of water shall be such as to produce a grout having a pumpable consistency, but in no case should it be more than required for such purpose. Time of mixing shall not be less than one minute.
- G. Six (6) inch thick (minimum) tremie seals shall be poured at the bottom of the form and allowed to set for 24 hours prior to pouring the entire height of the form to prevent river bottom sediment from rising and mixing with the grout.

4.04 CONCRETE PLACEMENT

- A. Concrete trucks are specifically **PROHIBITED** on the pier, excepting those areas for which pile jacketing has been complete for a minimum of 14 days. Concrete buggies or conveyor systems must be used to transport the concrete from the truck to the batch mixer located immediately adjacent to the pump hopper.
- B. Mixing and pumping equipment approved by the Engineer shall be used in preparation and handling of the concrete. All oil and other rust inhibitors shall be removed from the mixing drums, stirring mechanisms and other portions of the equipment in contact with the concrete before the mixers are used.
- C. All materials shall be accurately measured by volume or weight as they are fed into the mixer. The quantity of water shall be such as to produce a concrete having a pumpable consistency, but in no case should it be more than required for such purpose. Time of mixing shall not be less than one minute.
- D. The concrete shall be pumped into place using a single hose placed inside the form. The hose shall be placed so that the end is within 6 inches of the bottom before pumping begins. Concrete shall not be allowed to fall freely through water or air and shall be injected in such a manner as to assure uniformly sound, dense and undiluted concrete in the pile jacket. Unsatisfactory concrete resulting in separation of aggregates and honeycombing will not be accepted. A constant tremie must be maintained and injection ports must be on alternating sides of the piles.
- E. Six (6) inch thick (minimum) tremie seals shall be poured at the bottom of the form and allowed to set for 24 hours prior to pouring the entire height of the form to prevent river bottom sediment from rising and mixing with the concrete.
- F. During all concrete placing operations, Contractor shall make a constant inspection of the form, not allowing any leaks or form shifting to occur. Any leaks or shifting of forms shall be immediately repaired.
- G. All concrete shall be ready-mixed concrete, and shall be mixed and delivered in accordance with the "Specifications for Ready Mixed Concrete", ASTM C94 and as specified herein. The batch plant of the concrete producer shall be certified for compliance with the standards established by the National Ready-Mixed Concrete Association.

- H. All finished concrete shall be free of voids or any other defects.
- I. Pumping or tremie method, once started, shall be carried on as a continuous operation until the section of approved size and shape is completed.
- J. Concrete shall be conveyed as rapidly as practicable from the mixer to the pump by methods which prevent the separation or loss of ingredients. It shall be deposited, as nearly as practicable, in its final position to avoid re-handling or flowing.
- K. Concrete that has partially hardened shall not be deposited in the Work.

PART 5 - TESTING

5.01 SCOPE OF WORK

The Contractor shall provide all labor, material, equipment and supervision necessary to test the concrete and grout in accordance with the requirements stated below.

5.02 TESTING

- A. The methods used in sampling, making, curing and testing of the concrete and grout samples, either in the field or in the laboratory, shall be in accordance with the appropriate ASTM Standards and shall include but not be necessarily be restricted to the following standards:
 - ASTM C31 - Standard Method of Making and Curing Concrete Compressive and Flexural Test Specimens in the Field.
 - ASTM C39 - Standard method of Test for Compressive Strength of Cylindrical Concrete Specimens.
 - ASTM C94 - Standard Specification for Ready-Mix Concrete.
 - ASTM C138 - Standard Method of Test for Unit Weight, Yield, and Air Content of Concrete.
 - ASTM C172 - Standard Method of Sampling Fresh Concrete.
 - ASTM C192 - Standard Method of Making and Curing Concrete Test Specimens in the Laboratory.
 - ASTM 214 - Recommended Practice for Evaluation of Compression Test Results of Field Concrete.
 - ASTM C579- Standard Test Methods for Compressive Strength of Chemical-Resistant Mortars, Grouts, Monolithic Surfacing, and Polymer Concretes
- B. In the event the compressive strength of the cylinders, when tested, is below the specified minimum, the Engineer may require test cores of the hardened structures to be taken by the Contractor in accordance with ASTM Designation C42. If such test indicates that the core specimen is below the required standards, the concrete in question shall be removed and replaced by the

Contractor without cost to the Owner, or additional piles will be jacketed with concrete at the direction of the Engineer, at no additional cost to the Owner.

END OF SECTION 03310

| Bent | Pile | Pile Length | | Mudline Type Back/Front | Mudline Penetration (ft) Back/Front | Bottom Conditions for Repairs | Repair Detail | Notes |
|------|----------|-------------|----------------------|----------------------------|---|-------------------------------------|------------------|---|
| | | Min (ft) | Diff (ft) | | | | | |
| 66 | A | 4.8 | 0 | B- Silt | B- 1.0 | S | A | Old ratchet straps around pile: need to be removed. Pile currently has a jacket around it, of which the top 6' sounds hollow. Remove jacket and strap and re-encase pile |
| | | | | F- Silt, Debris | F- 0.8' | | | |
| 66 | E | 5 | 0.7 | B- Rip Rap | B- 0.0 | H<2 | A | Timber clamp 2' off mudline-has to be removed, good pile; 3-6" stone typical |
| | | | | F- Rip Rap | B- 0.0 | | | |
| 66 | F | 2.7 | 2 | B- Rip Rap | B- 0.0 | H<2 | E | 1.3' Clear space between back wall and pile; 12"+ stone typical |
| | | | | F- Rip Rap | F- 0.0 | | | |
| 65 | A | 4.8 | 0 | B- Silt | B- | S | A1 | Has a jacket-hollow on top |
| | | | | F- Silt | F- | | | |
| 65 | B | 3.8 | 0 | B- Silt | B- | S | A1 | Has a jacket-hollow on top |
| | | | | F- Silt | F- | | | |
| 65 | C | 10.8 | 0 | B- Silt | B- 2.1 | H | A | good pile for protective encasement |
| | | | | F- Gravel | F- 0.4 | | | |
| 65 | D | 10.1 | 0.2 | B- Silt-Refusal | B- 1.4 | S | A | good pile for protective encasement |
| | | | | F- debris | F- 0.8 | | | |
| 65 | E | 4.6 | 3.8' btw S+W face | B- Rip Rap | B- 0.0 | S | C | pile looks good for protective encasement; 2' diameter stone against south face resting against pile; 3-8" Rip Rap typ. |
| | | | | Rip Rap | F- 0.0 | | | |
| 65 | F | 4.2 | 0 | B- Rip Rap | B- 0.0 | O | C | good pile for protective encasement, 2' stone against south face of pile; 3"-8" rip rap typ. |
| | | | | F- Rip Rap | F- 0.0 | | | |
| 65 | F - BATT | 4.2 | 0 | B- Rip Rap | B- 0.0 | H<2 | D | Batter pile located south side of bent; 1.0' clear distance btw piles; 3"-8" rip rap typ.; 0.2' clear space @ mudline; 0.5' clear space between pile and top of back wall |
| | | | | F- Rip Rap | F- 0.0 | | | |
| 65 | I | 4 | 0 | B- Rip Rap | B- 0.0 | H<2 | E | see clear space above; custom form |
| | | | | F- Rip Rap | F- 0.0 | | | |
| 64 | A | 13.7 | 0 | B- Silt | B-2.4 | S | A | ratchet straps with no jacket; 3 chains attached to pile that lead into mud |
| | | | | F- Silt | F-2.2 | | | |
| 64 | B | 11.2 | 0.4 | B- Silt | B-3.0 | S | A | good pile for protective encasement |
| | | | | F- Silt | F-2.2 | | | |
| 64 | C | 10.6 | 0 | B- Silt | B-3.2 | S | A | good pile for protective encasement |
| | | | | F- Silt | F-2.3 | | | |
| 64 | D | 10.7 | 0.2 | B- Silt& gravel | B-2.8 | S | A | good pile for protective encasement |
| | | | | F- Silt | F-3.5 | | | |
| 64 | E | 10.2 | 0 | B- Silt | B-2.9 | S | A | good pile for protective encasement |
| | | | | F- Silt | F-2.6 | | | |

| | | | | | | | | |
|----|----------|------|-----|-------------|---------|-----|---|---|
| 64 | F | 9.9 | 0 | B- Silt | B-2.6 | S | A | good pile for protective encasement |
| | | | | F- Silt | F-2.8 | | | |
| 64 | G | 7.4 | 0.4 | B- gravel | B-0.0 | H | A | possible rip rap below gravel in rear of pile; good pile for protective encasement |
| | | | | F- Silt | F-2.8 | | | |
| 64 | H | 4.6 | 0 | B- Rip Rap | B-0.0 | H<2 | A | good pile for protective encasement |
| | | | | F- Rip Rap | F-0.0 | | | |
| 64 | I | 3.9 | 0.3 | B- Rip Rap | B-0.0 | H<2 | B | back wall flush with pile; good pile for protective encasement; 1.1' clear space to batter pile |
| | | | | F- Rip Rap | F-0.0 | | | |
| 64 | I-BATT | 2.7 | 1 | B- Rip Rap | B-0.0 | H<2 | E | custom form needed on north side of bent; 0.9' batter disappears into back wall |
| | | | | F- Rip Rap | F-0.0 | | | |
| 63 | A | 13.4 | 0.4 | B- silt | B-3.0 | S | A | Chain around pile 2' off mudline-needs to be removed |
| | | | | F- silt | F-2.6 | | | |
| 63 | B | 11.5 | 0.2 | B- silt | B-3.2 | S | A | good pile for protective encasement |
| | | | | F- silt | F-3.0 | | | |
| 63 | C | 10.9 | 0.1 | B- silt | B-3.2 | S | A | good pile for protective encasement |
| | | | | F- silt | F-2.9 | | | |
| 63 | D | 10.9 | 0.1 | B- silt | B-2.2 | S | A | good pile; 1.5' clear E-west and E-east |
| | | | | F- silt | F-2.3 | | | |
| 63 | E | 10.5 | 0 | B- silt | B-3.0 | S | A | good pile for protective encasement |
| | | | | F- silt | F-3.0 | | | |
| 63 | F | 10 | 0 | B- silt | B-3+ | H | A | good pile for protective encasement |
| | | | | F- silt | F-1.0 | | | |
| 63 | G | 9.8 | 0 | B- silt/RR? | B-0.3 | H | B | good pile for protective encasement |
| | | | | F- silt | F-2.0 | | | |
| 63 | H | 5 | 0.5 | B- Rip Rap | B-0.0 | H<2 | A | 4"-8" stone typ.; good pile for protective encasement |
| | | | | F- Rip Rap | F-0.0 | | | |
| 63 | I | 4.25 | 0.4 | B- Rip Rap | B-0.0 | H<2 | E | good; 0.7' clear top & bottom |
| | | | | F- Rip Rap | F-0.0 | | | |
| 63 | I - BATT | 3 | 3 | B- Rip Rap | B-0.0 | H<2 | D | top 18" in back wall; 0.7' top clear & bottom |
| | | | | F- Rip Rap | F-0.0 | | | |
| 62 | A | 13.3 | 0 | B- silt | B-3.0'+ | S | A | 0.3' Clear to skirt wall; chain 6' above mudline; Distance of cap to distance of wall 5.0' |
| | | | | F- silt | F-3.0'+ | | | |
| 62 | B | 12.2 | 0 | B- silt | B-3.0'+ | S | A | good pile for protective encasement |
| | | | | F- silt | F-3.0'+ | | | |
| 62 | C | 11.4 | 0 | B- silt | B-3.0'+ | S | A | good pile for protective encasement |
| | | | | F- silt | F-3.0'+ | | | |

| | | | | | | | | |
|----|----------|------|----------|-----------------|---------|-----|---|---|
| 62 | D | 11.8 | 0.4 | B- silt | B-3.0'+ | S | A | good pile for protective encasement |
| | | | | F- silt | F-3.0'+ | | | |
| 62 | E | 10.8 | 0 | B- silt | B-3.0'+ | S | A | good pile for protective encasement |
| | | | | F- silt | F-3.0'+ | | | |
| 62 | F | 8.7 | 0 | B- silt | B-3.0'+ | S | A | good pile for protective encasement |
| | | | | F- silt | F-3.0'+ | | | |
| 62 | G | 10 | 0 | B- silt | B-2.0 | S | A | good pile for protective encasement |
| | | | | F- silt | F-3.0'+ | | | |
| 62 | H | 7.1 | 0.9 | B- Rip Rap | B-0.0 | H<2 | B | good pile for protective encasement |
| | | | | F- Rip Rap/silt | F-0.5 | | | |
| 62 | I | 4.4 | 0.6 | B- Rip Rap | B-0.0 | H<2 | B | good pile for protective encasement |
| | | | | F- Rip Rap | F-0.0 | | | |
| 62 | J | 4.6 | 0 | B- Rip Rap | B-0.0 | H<2 | E | good pile for protective encasement |
| | | | | F- Rip Rap | F-0.0 | | | |
| 62 | J - BATT | 3.3 | 1 | B- Rip Rap | B-0.0 | H<2 | D | 0" clear at top; 0.2' distance @ top of pile (1.2' clear @ mudline) |
| | | | | F- Rip Rap | F-0.0 | | | |
| 61 | A | 12.9 | 0 | B- silt | B-3.0+ | S | A | 1.0' Clear to skirt wall; chain 5' above mudline |
| | | | | F- silt | F-2.0 | | | |
| 61 | B | 12 | 0 | B- silt | B-3.0+ | S | A | good pile for protective encasement |
| | | | | F- silt | F-3.0+ | | | |
| 61 | C | 11.4 | 0 | B- silt | B-3.0+ | S | A | good pile for protective encasement |
| | | | | F- silt | F-3.0+ | | | |
| 61 | D | 11.2 | 0 | B- silt | B-3.0+ | S | A | minor crack @ corner 1/8"x4' E.F, SE corner |
| | | | | F- silt | F-3.0+ | | | |
| 61 | E | 11 | 0.1 | B- silt | B-3.0+ | S | A | good pile for protective encasement |
| | | | | F- silt | F-3.0+ | | | |
| 61 | F | 10.8 | 0.1 | B- silt | B-3.0+ | S | A | good pile for protective encasement |
| | | | | F- silt | F-3.0+ | | | |
| 61 | G | 10.7 | 0 | B- silt | B-1.5 | S | A | good pile for protective encasement |
| | | | | F- Rip Rap | F-3.0+ | | | |
| 61 | H | 7.5 | 2.3 | B- Rip Rap | B-0 | O | C | Rip Rap diameter 1.0'+ typ. |
| | | | | F- Rip Rap/silt | F-1.5 | | | |
| 61 | I | 3.3 | 1.9 west | B- Rip Rap | B-0.0 | O | C | Stone on south 3.3' , north stone 3.0' |
| | | | | F- Rip Rap | F-0.0 | | | |
| 61 | J | 3 | 2.8 west | B- Rip Rap | B-0.0 | H<2 | E | good pile for protective encasement |
| | | | | F- Rip Rap | F-0.0 | | | |

| | | | | | | | | |
|----|----------|------|-----|-----------------|--------|-----|---|--|
| 61 | J - BATT | 4 | 1.2 | B- Rip Rap | B-0.0 | H<2 | D | 1.1' clear at mudline to back wall; 0' clear for 1" @ top |
| | | | | F- Rip Rap | F-0.0 | | | |
| 60 | A | 13.4 | 0 | B- silt | B-3.0+ | S | A | 0.6' distance between skirt wall and A; chain 6' above mudline |
| | | | | F- silt | F-1.5 | | | |
| 60 | B | 12 | 0 | B- silt | B-3.0+ | S | A | good pile for protective encasement |
| | | | | F- silt | F-3.0+ | | | |
| 60 | C | 11.4 | 0 | B- silt | B-3.0+ | S | A | good pile for protective encasement |
| | | | | F- silt | F-3.0+ | | | |
| 60 | D | 11.3 | 0 | B- silt | B-3.0+ | S | A | good pile for protective encasement |
| | | | | F- silt | F-2.5 | | | |
| 60 | E | 11 | 0 | B- silt | B-3.0+ | S | A | good pile for protective encasement |
| | | | | F- silt | F-3.0+ | | | |
| 60 | F | 11 | o | B- silt | B-3.0+ | S | A | good pile for protective encasement |
| | | | | F- silt | F-3.0+ | | | |
| 60 | G | 10.4 | 0 | B- silt | B-2.0 | S | A | good pile for protective encasement |
| | | | | F- silt | F-2.0 | | | |
| 60 | H | 8 | 0.5 | B- Rip Rap | B-0.0 | H<2 | B | good pile for protective encasement |
| | | | | F- Silt/Rip Rap | F-0.2 | | | |
| 60 | I | 4.2 | 0.7 | B- Rip Rap | B-0.0 | H<2 | B | good pile for protective encasement |
| | | | | F- Rip Rap | F-0.0 | | | |
| 60 | J | 3.2 | 0.5 | B- Rip Rap | B-0.0 | H<2 | E | 1.2' clear I-plumb to I-batter |
| | | | | F- Rip Rap | F-0.0 | | | |
| 60 | J - BATT | 3 | 1 | B- Rip Rap | B-0.0 | H<2 | D | 0.0' clear top for 1"; 0.9' @ mudline clear to back wall |
| | | | | F- Rip Rap | F-0.0 | | | |
| 59 | A | 13.4 | 0 | B- silt | B-2.5 | S | A | Rope on pile 5' south of cap; chain 2' above mudline |
| | | | | F- silt | F-2.0 | | | |
| 59 | B | 11.5 | 0 | B- silt | B-3.0+ | S | A | good pile for protective encasement |
| | | | | F- silt | F-3.0+ | | | |
| 59 | C | 11.1 | 0 | B- silt | B-3.0+ | S | A | good pile for protective encasement |
| | | | | F- silt | F-3.0+ | | | |
| 59 | D | 11.5 | 0.2 | B- silt | B-3.0+ | S | A | good pile for protective encasement |
| | | | | F- silt | F-3.0+ | | | |
| 59 | E | 11.1 | 0.4 | B- silt | B-3.0+ | S | A | good pile for protective encasement |
| | | | | F- silt | F-3.0+ | | | |
| 59 | F | 10 | 0.3 | B- silt | B-2.5 | S | A | good pile for protective encasement |
| | | | | F- silt | F-3.0+ | | | |

| | | | | | | | | |
|----|----------|------|-----|------------|--------|-----|---|---|
| 59 | G | 8.1 | 0.3 | B- Rip Rap | B-0.0 | H<2 | B | Rope on pile |
| | | | | F- Rip Rap | F-0.0 | | | |
| 59 | H | 4.2 | 0.4 | B- Rip Rap | B-0.0 | H<2 | B | good pile for protective encasement |
| | | | | F- Rip Rap | F-0.0 | | | |
| 59 | I | 2.5 | 1 | B- Rip Rap | B-0.0 | H<2 | E | good pile for protective encasement |
| | | | | F- Rip Rap | F-0.0 | | | |
| 59 | I - BATT | 3 | 1.8 | B- Rip Rap | B-0.0 | H<2 | D | top 0.0' clear to back wall for 1.6' ; 0.3' clear at mudline |
| | | | | F- Rip Rap | F-0.0 | | | |
| 58 | A | 13.3 | 0 | B- silt | B-3.0+ | S | A | clear 0.8' to skirt wall; chain @ mid pile |
| | | | | F- silt | F-0.8 | | | |
| 58 | B | 11.8 | 0 | B- silt | B-3.0+ | S | A | good pile for protective encasement |
| | | | | F- silt | F-3.0+ | | | |
| 58 | C | 11.5 | 0 | B- silt | B-3.0+ | S | A | good pile for protective encasement |
| | | | | F- silt | F-3.0+ | | | |
| 58 | D | 11 | 0.1 | B- silt | B-3.0+ | S | A | good pile for protective encasement |
| | | | | F- silt | F-3.0+ | | | |
| 58 | E | 10.8 | 0.1 | B- silt | B-3.0+ | S | A | good pile for protective encasement |
| | | | | F- silt | F-3.0+ | | | |
| 58 | F | 10.6 | 0 | B- silt | B-3.0+ | S | A | good pile for protective encasement |
| | | | | F- silt | F-3.0+ | | | |
| 58 | G | 7.9 | 1.7 | B- Rip Rap | B-0.0 | H<2 | B | good pile for protective encasement |
| | | | | F- silt | F-1.0 | | | |
| 58 | H | 4.1 | 2.3 | B- Rip Rap | B-0.0 | O | C | 2' diameter stone back side of pile |
| | | | | F- Rip Rap | F-0.0 | | | |
| 58 | I | 3 | 1 | B- Rip Rap | B-0.0 | O | C | 3-4' diameter stone in way of form; 0.9' clear between I-plumb and I-batter |
| | | | | F- Rip Rap | F-0.0 | | | |
| 58 | I - BATT | 3.5 | 1.7 | B- Rip Rap | B-0.0 | H<2 | D | 0.7' clear @ mudline; top 1.5' embedded |
| | | | | F- Rip Rap | F-0.0 | | | |
| 57 | A | 13.5 | 0 | B- silt | B-3.0+ | S | A | Chain @ mudline |
| | | | | F- silt | F-3.0+ | | | |
| 57 | B | 10.9 | 0 | B- silt | B-3.0+ | S | A | good pile for protective encasement |
| | | | | F- silt | F-3.0+ | | | |
| 57 | C | 10.9 | 0 | B- silt | B-3.0+ | S | A | good pile for protective encasement |
| | | | | F- silt | F-3.0+ | | | |
| 57 | D | 10.4 | 0.3 | B- silt | B-1.5 | S | A | good pile for protective encasement |
| | | | | F- silt | F-2.5 | | | |

| | | | | | | | | |
|----|-------------|------|------|------------|---------|-----|---|--|
| 57 | E | 4 | 3 | B- Rip Rap | B-0.0 | H<2 | B | good pile for protective encasement; Rip Rap against pile |
| | | | | F- Rip Rap | F-0.0 | | | |
| 57 | F | 3.3 | 0.6 | B- Rip Rap | B-0.0 | H<2 | E | good pile for protective encasement; 0.8' clear between H-plumb and H-batter |
| | | | | F- Rip Rap | F-0.0 | | | |
| 57 | F - BATT | 2.5 | 1.7 | B- Rip Rap | B-0.0 | H<2 | D | top 1.5' embedded ; 0.4' clear @ mudline |
| | | | | F- Rip Rap | F-0.0 | | | |
| 56 | A | 13 | 0 | B- silt | B-3.0+ | S | A | Chain 4' off mudline; good pile for protective encasement; timber clasp 4' down from cap-needs to be removed |
| | | | | F- silt | F-2.4 | | | |
| 56 | B | 11 | 0 | B- silt | B-3.0+ | S | A | Timber clamp 4' off top of pile-has to be removed, good pile for protective encasement |
| | | | | F- silt | F-2.7 | | | |
| 56 | C | 10.9 | 0 | B- silt | B-1.9 | S | A | good pile for protective encasement |
| | | | | F- silt | F-1.9 | | | |
| 56 | D | 10 | 0 | B- silt | B-1.7 | S | A | remove timber clamp |
| | | | | F- silt | F-2.3 | | | |
| 56 | E | 4.9 | 2 | B- Rip Rap | B-0.0 | H<2 | B | remove timber clamp |
| | | | | F- Rip Rap | F-0.0 | | | |
| 56 | F | 2 | 2.5 | B- Rip Rap | B-0.0 | H<2 | E | against back wall; 1.2' face of pile to face of wall |
| | | | | F- Rip Rap | F-0.0 | | | |
| 55 | A-Int North | 12.4 | 0.2 | B- silt | B-3.0+ | S | A | good pile for protective encasement |
| | | | | F- silt | F-1.6 | | | |
| 55 | A | 12 | 0 | B- silt | B-2.1 | S | A | good pile for protective encasement |
| | | | | F- silt | F-2.0 | | | |
| 55 | B | 10.1 | 0.2 | B- silt | B-2.3 | S | A | good pile for protective encasement |
| | | | | F- silt | F-1.6 | | | |
| 55 | C | 6.3 | 2.7 | B- Rip Rap | B-0.0 | H | A | good pile for protective encasement |
| | | | | F- silt | F-2.5 | | | |
| 55 | D | 2.4 | 3.1 | B-Rip Rap | B-0.0 | O | C | rip rap around pile; 18" diameter in rear of pile; cant be moved by hand |
| | | | | F- Rip Rap | F-0.0 | | | |
| 55 | E | 1.5 | 2 | B- Rip Rap | B-0.0 | H<2 | E | 1.2' clear face of pile to face of wall |
| | | | | F- Rip Rap | F-0.0 | | | |
| 55 | E- BATT | 1.7 | 2 | B- Rip Rap | B-0.0 | H<2 | D | 1.2' top of batter embedded; good pile |
| | | | | F- Rip Rap | F-0.0 | | | |
| 54 | A | 12.5 | 0.5 | B- silt | B-3.0+ | S | A | chain on pile 3' above mudline; possible debris front of pile under mudline |
| | | | | F- debris | F-1.2 | | | |
| 54 | B | 11 | 0.03 | B- silt | B-2.2 | S | A | good pile for protective encasement |
| | | | | F- silt | F-3.0'+ | | | |

| | | | | | | | | |
|----|-------------|------|-----|--------------|--------|-----|-----|--|
| 54 | C | 8.8 | 0.4 | B- Rip Rap | B-0 | H | B | good pile for protective encasement |
| | | | | F- silt | F-1.7 | | | |
| 54 | D | 4.8 | 0.3 | B- Rip Rap | B-0.0 | H<2 | B | good pile for protective encasement |
| | | | | F- Rip Rap | F-0.0 | | | |
| 54 | E - BATT | 2.2 | 1.5 | B- Rip Rap | B-0.0 | O | D/C | 2' diameter stone NW corner; top 18" buried in wall |
| | | | | F- Rip Rap | F-0.0 | | | |
| 54 | E | 1.5 | 2 | B- Rip Rap | B-0.0 | O | D/C | 18" to corner; 1.3' clear distance; 1' diameter rip rap |
| | | | | F- Rip Rap | F-0.0 | | | |
| 54 | E-Int 53/54 | 5.2 | 0 | B- Rip Rap | B-0.0 | H<2 | B | good pile for protective encasement |
| | | | | F- Rip Rap | F-0.0 | | | |
| 53 | A | 13.4 | 0 | B- silt | B-3.0+ | S | A | Chain on pile 5' above mudline; good pile for protective encasement |
| | | | | F- silt | F-2.0 | | | |
| 53 | B | 12.2 | 0 | B- silt | B-3.0+ | S | A | good pile for protective encasement |
| | | | | F- silt | F-2.9 | | | |
| 53 | C | 12.9 | 0 | B- silt | B-3.0+ | S | A | good pile for protective encasement |
| | | | | F- silt | F-2.3 | | | |
| 53 | D | 9.4 | 0 | B- silt | B-3.0+ | S | A | good pile for protective encasement |
| | | | | F- silt | F-3.0+ | | | |
| 53 | E | 8.7 | 0 | B- silt | B-1.6 | S | A | good pile for protective encasement |
| | | | | F- silt | F-2.3 | | | |
| 52 | A | 17 | 0 | B- silt | B-3.0+ | S | A | chain on pile 8' above mudline; debris front of pile (large stone?) |
| | | | | F- debris | F-0.1 | | | |
| 52 | A1 | 16.9 | 0.2 | B- sand/silt | B-0.2 | O | C | good pile for protective encasement; lots of debris around front of pile |
| | | | | F- debris | F-0.2 | | | |
| 52 | B | 16.5 | 0 | B- silt | B-0.4 | S | A | good pile for protective encasement |
| | | | | F- silt | F-1.6 | | | |
| 52 | C | 14.8 | 0 | B- silt | B-2.5 | S | A | good pile for protective encasement |
| | | | | F- silt | F-3.0+ | | | |
| 52 | D | 13.1 | 0 | B- silt | B-3.0+ | S | A | good pile for protective encasement |
| | | | | F- silt | F-3.0+ | | | |
| 52 | E | 12.4 | 0 | B- silt | B-2.3 | S | A | good pile for protective encasement |
| | | | | F- silt | F-3.0+ | | | |
| 52 | E-Int 52/53 | 10.8 | 0 | B- silt | B-2.6 | S | A | good pile for protective encasement |
| | | | | F- silt | F-3.0+ | | | |
| 27 | AN | 11.6 | 0.2 | B- silt | B-3.0+ | S | A | chain 6' below cap; chain 3' above mudline; NO EVIDENCE OF CORE |
| | | | | F- debris | F-0.3 | | | |

| | | | | | | | | |
|-----|-----|------|-----|------------|---------|-----|---|--|
| 27 | AS | 10.9 | 0.3 | B- debris | B-0.5 | H | B | wood form still in place from core on west face, elevation at 6.4' below cap |
| | | | | F- debris | F-0.2 | | | |
| 26 | A+1 | 9.4 | 0.2 | B- silt | B-2.3 | S | A | good pile for protective encasement |
| | | | | F- silt | F-3.0+ | | | |
| 26 | A | 8.8 | 0 | B- silt | B-1.5 | S | A | good pile for protective encasement |
| | | | | F- silt | F-1.7 | | | |
| 25 | A+2 | 9.3 | 0.2 | B- silt | B-1.8 | S | A | good pile for protective encasement |
| | | | | F- silt | F-2.2 | | | |
| 25 | A+1 | 9 | 0 | B- silt | B-2.4 | S | A | good pile for protective encasement |
| | | | | F- silt | F-3.0+ | | | |
| 25 | A-1 | 9 | 0 | B- silt | B-2.5 | S | A | good pile for protective encasement |
| | | | | F- silt | F-3.0+ | | | |
| 25 | B | 8.5 | 0 | B- silt | B-2.5 | S | A | good pile for protective encasement |
| | | | | F- silt | F-3.0+ | | | |
| 25 | C | 7.3 | 0.5 | B- Rip Rap | B-0.0 | O | C | good pile for protective encasement; rip rap 1-1.5' diameter |
| | | | | F- silt | F-3.0'+ | | | |
| 25 | D | 4.2 | 2.4 | B- Rip Rap | B-0.0 | H<2 | B | rip rap all around pile; 4.4' clear distance between caisson and pile |
| | | | | F- Rip Rap | F-0.0 | | | |
| 26 | B | 8.1 | 0 | B- silt | B-1.4 | S | A | good pile for protective encasement |
| | | | | F- silt | F-1.6 | | | |
| 26 | C | 8 | 0 | B- gravel | B-0 | H | B | stone and gravel south of pile (does not appear to be rip rap) |
| | | | | F- silt | F-2.5 | | | |
| 26 | D | 3.3 | 3.2 | B- Rip Rap | B-0 | H<2 | B | good pile for protective encasement; clear distance 3.7' between pile and caisson |
| | | | | F- gravel | F-0.1 | | | |
| 27 | B | 10 | 0.3 | B- Silt | B-1.7 | S | A | core on north face, 5' above mudline; remove formwork and timber clamp on pile |
| | | | | F- Silt | F-3.0+ | | | |
| 27 | C | 4.4 | 1.9 | B- Rip Rap | B-0.0 | H<2 | B | 1' diameter rip rap; clear distance of 3.9' between pile and caisson |
| | | | | F- Rip Rap | F-0.0 | | | |
| 107 | A | 9.4 | 0 | B- Silt | B-1.9 | S | A | core located north face 5.0' below cap; CORE NOT INDICATED ON PLAN |
| | | | | F- silt | F-2.4 | | | |
| 107 | B | 5.3 | 0 | B- Rip Rap | B-0 | H<2 | B | core on north face, 1.4' below cap; small rip rap and gravel; 2.4' clear distance btw pile and caisson |
| | | | | F- gravel | F-0.1 | | | |
| 106 | A | 9.4 | 0 | B- silt | B-1.5 | S | A | good pile for protective encasement |
| | | | | F- silt | F-0.7 | | | |
| 106 | B | 8.1 | 0 | B- silt | B-3.0+ | S | A | good pile for protective encasement |
| | | | | F- silt | F-3.0+ | | | |

| | | | | | | | | |
|-----|---|------|-----|------------|--------|-----|---|--|
| 106 | C | 7.1 | 0 | B- gravel | B-0.1 | H | A | clear distance 4.4' between pile and caisson |
| | | | | F- silt | F-2.6 | | | |
| 105 | A | 10 | 0 | B- silt | B-1.5 | S | A | good pile for protective encasement |
| | | | | F- silt | 3.0+ | | | |
| 105 | B | 8.1 | 0 | B- silt | B-3.0+ | S | A | good pile for protective encasement |
| | | | | F- silt | F-3.0+ | | | |
| 105 | C | 4.6 | 3 | B- Boulder | B-0.0 | O | C | 3' Diameter boulder SW corner; clear distance of 5.2' between pile and caisson |
| | | | | F- Gravel | F-0.5 | | | |
| 104 | A | 10.4 | 0 | B- silt | B-1.6 | S | A | good pile for protective encasement |
| | | | | F- silt | F-3.0+ | | | |
| 104 | B | 8 | 2.6 | B- Boulder | B-0.3 | O | C | Boulder SE corner 2'+ diameter; good pile for protective encasement |
| | | | | F- silt | F-0.5 | | | |
| 104 | C | 5.3 | 2.8 | B- Boulder | B-0 | O | C | Boulder SE corner 2'+ diameter; rip rap rear of pile (south); clear distance of 4.4' pile to caisson |
| | | | | F- silt | F-0.3 | | | |
| 103 | A | 11.2 | 0 | B- debris | B- 0.7 | H<2 | B | good pile for protective encasement |
| | | | | F- debris | F-0.3 | | | |
| 103 | B | 9.7 | 0 | B- silt | B-2.0 | S | A | 1/8" minor cracking west face of pile |
| | | | | F- silt | F-2.0 | | | |
| 103 | C | 4.2 | 4.2 | B- Rip Rap | B-0.0 | H<2 | B | 3' diameter to west 2" clear space between pile and boulder; clear distance between pile and caisson is 4.5' |
| | | | | F- silt | F-1.0 | | | |
| 102 | A | 8.8 | 0 | B- silt | B-2.0 | H<2 | B | good pile for protective encasement |
| | | | | F- debris | F-0.0 | | | |
| 102 | B | 9.3 | 0.6 | B- silt | B-3.0+ | S | A | good pile for protective encasement |
| | | | | F- silt | F-2.5 | | | |
| 102 | C | 7.1 | 1 | B- Rip Rap | B-0.0 | H | A | good pile for protective encasement; Clear distance from pile to back wall is 6.2' |
| | | | | F- silt | F-3.0+ | | | |
| 101 | A | 11.7 | 0 | B- silt | B-3.0+ | S | A | good pile for protective encasement |
| | | | | F- silt | F-2.5 | | | |
| 101 | B | 8.2 | 0.6 | B- gravel | B-0.0 | H | B | 10.4' distance between pile and back wall |
| | | | | F- sand | F-0.0 | | | |
| 100 | A | 11.7 | 0 | B- silt | B-3.0+ | S | A | good pile for protective encasement |
| | | | | F- silt | F-2.0 | | | |
| 100 | B | 7 | 0 | B- Rip Rap | B-0.0 | H<2 | B | 2.1' clear to back wall; stone Rip Rap/Debris present |
| | | | | F- Rip Rap | F-0.0 | | | |
| 99 | A | 12.9 | 0.6 | B- silt | B-2.0 | S | A | good pile for protective encasement |
| | | | | F- debris | F-0.2 | | | |

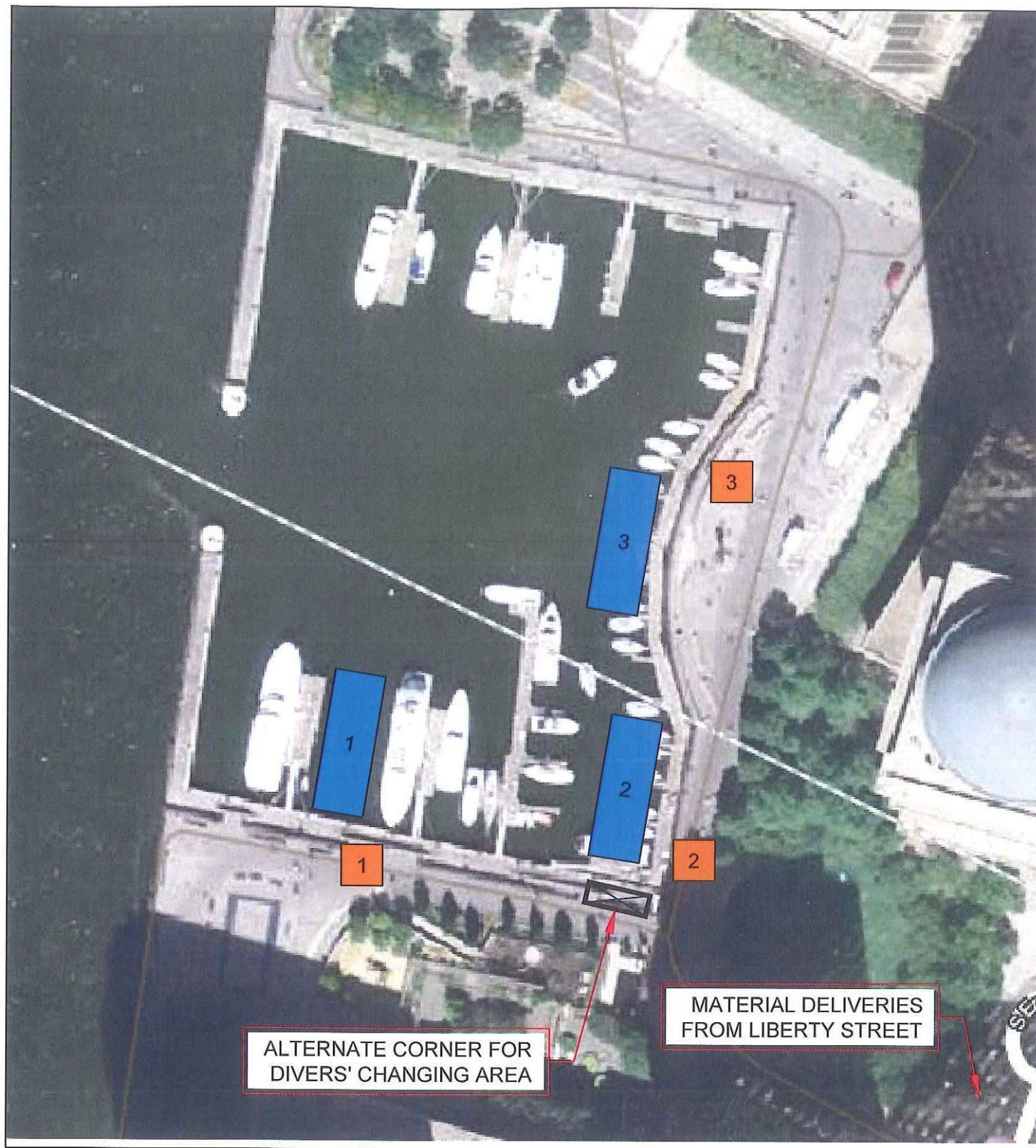
| | | | | | | | | |
|----|----------|------|-----|------------|--------|-----|---|--|
| 99 | B | 11.7 | 0.8 | B- silt | B-1.4 | S | A | good pile for protective encasement |
| | | | | F- silt | F-2.0 | | | |
| 99 | C | 7.4 | 1.3 | B- silt | B-0.0 | O | C | massive Rip Rap, SE corner 3'+ diameter; 4.6' clear to back wall |
| | | | | F- Rip Rap | F-0.5 | | | |
| 98 | A | 12.8 | 0 | B- silt | B-3.0+ | S | A | good pile for protective encasement |
| | | | | F-debris | F-0.2 | | | |
| 98 | B | 10.1 | 0.4 | B- Rip Rap | B-0.0 | O | C | Boulder SE corner |
| | | | | F- silt | F-2.5 | | | |
| 98 | C | 7.4 | 1.2 | B- Rip Rap | B-0.0 | O | C | Boulders; 5.1' clear to back wall |
| | | | | F- Rip Rap | F-0.2 | | | |
| 97 | A | 9.9 | 0.4 | B- silt | B-2.0 | S | A | good pile for protective encasement |
| | | | | F- silt | F-2.5 | | | |
| 97 | B | 8.6 | 3.6 | B- silt | B-2.8 | H | B | SE face large boulder/debris |
| | | | | F- Rip Rap | F-0.0 | | | |
| 97 | C | 6.4 | 2 | B- Rip Rap | B-0.0 | O | C | 2'+ diameter boulders; 4.8' clear to back wall |
| | | | | F- Rip Rap | F-0.0 | | | |
| 96 | A | 15.8 | 0 | B- silt | B-1.7 | S | A | good pile for protective encasement |
| | | | | F- silt | F-2.0 | | | |
| 96 | B | 12.6 | 0.8 | B- Rip Rap | B-0.0 | H | A | good pile for protective encasement |
| | | | | F- silt | F-2.0 | | | |
| 96 | C | 5.6 | 3.8 | B- Rip Rap | B-0.0 | O | C | rip rap 2'-3' diameter all sides; 3.2' clear to back wall |
| | | | | F- Rip Rap | F-0.0 | | | |
| 95 | A | 14.6 | 0 | B- Silt | B-2.2 | S | A | good pile for protective encasement |
| | | | | F- silt | F-2.8 | | | |
| 95 | B | 4.6 | 1.8 | B- Rip Rap | B-0.0 | O | C | Large rip rapped on back |
| | | | | F- Rip Rap | F-0.0 | | | |
| 95 | C | 2.3 | 1.4 | B- Rip Rap | B-0.0 | O | C | 1.9 clear to back wall; large rip rap |
| | | | | F- Rip Rap | F-0.0 | | | |
| 94 | A | 14.9 | 0 | B- silt | B-2.0 | S | A | good pile for protective encasement |
| | | | | F- silt | F-1.3 | | | |
| 94 | B | 8.7 | 2.4 | B- Rip Rap | B-0.0 | H | B | Rip Rap (large) |
| | | | | F- Rip Rap | F-0.0 | | | |
| 94 | C | 4 | 0 | B- Rip Rap | B-0.0 | H | B | Rip Rap (small) |
| | | | | F- Rip Rap | F-0.0 | | | |
| 94 | C - BATT | 4.4 | 0 | B- Rip Rap | B-0.0 | H<2 | B | Rip Rap around pile |
| | | | | F- Rip Rap | F-0.0 | | | |

| | | | | | | | | |
|----|---|------|-----|----------------|--------|-----|---|--|
| 93 | A | 15 | 0.7 | B- Rip Rap | B-0.0 | H | A | Small stone, compact mudline rear of pile |
| | | | | F- silt | F-1.7 | | | |
| 93 | B | 12.4 | 2.2 | B- Rip Rap | B-0.0 | H | B | Rip Rap 12"+ typ. |
| | | | | F- silt | F-0.5 | | | |
| 93 | C | 8.7 | 2.2 | B- Rip Rap | B-0.0 | H | B | Rip Rap 12"+ typ. |
| | | | | F- Rip Rap | F-0.3 | | | |
| 92 | A | 16.8 | 0.2 | B- silt | B-1.0 | S | A | good pile for protective encasement |
| | | | | F- silt | F-0.8 | | | |
| 92 | B | 14.8 | 0.7 | B- Rip Rap | B-0.0 | O | C | 4' diameter boulder SE; 6" clear space |
| | | | | F- silt | F-0.7 | | | |
| 92 | C | 11.2 | 2.1 | B- Rip Rap | B-0.0 | O | C | 3'+ diameter boulder on east face; 6-7' clear space to bent 88 |
| | | | | F- silt | F-0.6 | | | |
| 91 | A | 19.2 | 1.1 | B- small stone | B-0.0 | H | A | good pile for protective encasement |
| | | | | F- silt | F-0.4 | | | |
| 91 | B | 16.9 | 1.1 | B- Rip Rap | B-0.0 | H<2 | B | Rip Rap approximately 6-12" diameter |
| | | | | F- Rip Rap | F-0.0 | | | |
| 91 | C | 16.4 | 2.1 | B- Rip Rap | B-0.0 | H<2 | B | clear distance between batter on 88 is 0.4'; over pour on east side of pile; 6-12" Rip Rap |
| | | | | F- Rip Rap | F-0.0 | | | |
| 90 | A | 25.9 | 0 | B- silt | B-1.7 | S | A | good pile for protective encasement |
| | | | | F- silt | F-1.3 | | | |
| 90 | B | 25.1 | 0.3 | B- silt | B-3.0+ | S | A | good pile for protective encasement |
| | | | | F- silt | F-3.0+ | | | |
| 90 | C | 24.3 | 0 | B- silt | B-1.7 | S | A | good pile for protective encasement |
| | | | | F- silt | F-3.0+ | | | |
| 89 | A | 35.1 | 1 | B- silt | B-1.8 | S | A | Mud around the pile looks jetted-hole around the pile |
| | | | | F- silt | F-1.7 | | | |
| 89 | B | 32.1 | 0.4 | B- silt | B-1.9 | S | A | approximately 10' from alpha pile |
| | | | | F- silt | F-2.0 | | | |
| 89 | C | 29 | 0.5 | B- silt | B-1.6 | S | A | approximately 8' between this pile and bravo pile |
| | | | | F- silt | F-2.4 | | | |

EXHIBIT H

CONCEPTUAL STAGING PLAN

(attached)



BATTERY PARK CITY PILE REMEDIATION PROGRAM PHASE IV-CONCEPTUAL STAGING PLAN

NOTES:

1. STAGING OF SMALL WORK BARGES FROM WITHIN THE MARINA
2. MATERIAL DELIVERIES COME BY LIBERTY STREET.
3. UP TO 3 BARGES & 3 PUMP LOCATIONS CAN BE USED.
4. DIVE SHACKS SHOULD BE CONTAINED TO THE BARGES OR IN S CORNER AS SHOWN. CM MUST HAVE ACCESS TO ALL LOCATIONS FOR THEIR DIVERS TO WORK/CHANGE.
5. LOCATION #3 - EVENTS @ THIS LOCATION WILL REQUIRE THIS STATION TO BE BROKEN DOWN 3x FOR 2 WEEKS EACH.

LEGEND:



SMALL BARGE



STAGING/PUMP AREA

EXHIBIT I

NYS DEC PERMIT

(attached)

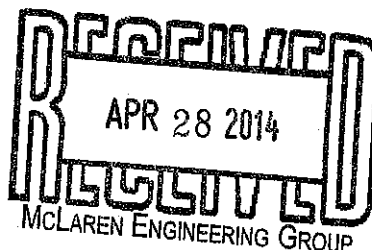
New York State Department of Environmental Conservation
Division of Environmental Permits, Region 2
47-40 21ST Street, Long Island City, NY 11101-5407
Phone: (718) 482-4997 \$ **FAX:** (718) 482-4975
Website: www.dec.state.ny.us



Joe Martens
Commissioner

April 17, 2014

Mr. Matthew Daniels
M. G. McLaren, P. C.
100 Snake Hill Road
West Nyack, NY 10994



130870
mjd
Rjm
CTC

Re: NYSDEC Permit application #2-6299-00027/00026
Battery Park City Esplanade – Pile Remediation Program 2014
Facility: BATTERY PARK CITY
ECL Article 25 - Tidal Wetlands
ECL Article 15 - Protection of Waters
6 NYCRR 608 - Water Quality Certification
NOTICE OF PERMIT ISSUANCE

Dear Mr. Daniels:

Enclosed is your permit for the above referenced project. It is effective beginning April 17, 2014 and expires on December 31, 2017.

Please read all permit conditions carefully. All permit documents must be available upon request by Department staff and must be distributed to and understood by personnel responsible for the proper operation of the project and compliance with the permit requirements. Any violation of these permit conditions constitutes a violation of the Environmental Conservation Law.

Any questions concerning this matter should be directed to Sandra Reyes-Guerra in the Division of Environmental Permits at (718) 482-4969.

Very truly yours,

Sandra Reyes-Guerra
Environmental Analyst 2



PERMIT
Under the Environmental Conservation Law (ECL)

Permittee and Facility Information

Permit Issued To:
BATTERY PARK CITY AUTHORITY
24TH FL

1 WORLD FINANCIAL CTR
NEW YORK, NY 10281
(212) 417-2000

Facility:
BATTERY PARK CITY
WEST ST - W SIDE - CHAMBERS ST TO
BATTERY PL
NEW YORK, NY

Facility Location: in NEW YORK COUNTY **Village:** MANHATTAN

Facility Principal Reference Point: NYTM-E: 583.006 NYTM-N: 4506.765
Latitude: 40°42'27.4" Longitude: 74°01'02.5"

Project Location: W of BPC btwn Liberty & Vesey & btwn Murray & Chambers, under esplanade
Authorized Activity: Phase 2 Pile Remediation consists of applying protective and structural wraps to 654 piles at the location referenced above.

Permit Authorizations

Excavation & Fill in Navigable Waters - Under Article 15, Title 5

Permit ID 2-6299-00027/00024

New Permit

Effective Date: 4/17/2014

Expiration Date: 12/31/2017

Water Quality Certification - Under Section 401 - Clean Water Act

Permit ID 2-6299-00027/00025

New Permit

Effective Date: 4/17/2014

Expiration Date: 12/31/2017

Tidal Wetlands - Under Article 25

Permit ID 2-6299-00027/00026

New Permit

Effective Date: 4/17/2014

Expiration Date: 12/31/2017

NYSDEC Approval

By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the ECL, all applicable regulations, and all conditions included as part of this permit.

Permit Administrator: JOHN F CRYAN, Regional Permit Administrator
Address: NYSDEC REGION 2 HEADQUARTERS
47-40 21ST ST
LONG ISLAND CITY, NY 11101 -5407

Authorized Signature:

Date 4/17/2014



Permit Components

NATURAL RESOURCE PERMIT CONDITIONS

WATER QUALITY CERTIFICATION SPECIFIC CONDITION

GENERAL CONDITIONS, APPLY TO ALL AUTHORIZED PERMITS

NOTIFICATION OF OTHER PERMITTEE OBLIGATIONS

NATURAL RESOURCE PERMIT CONDITIONS - Apply to the Following Permits: EXCAVATION & FILL IN NAVIGABLE WATERS; WATER QUALITY CERTIFICATION; TIDAL WETLANDS

1. **Conformance With Plans** All activities authorized by this permit must be in strict conformance with the approved plans submitted by the applicant or applicant's agent as part of the permit application. Such approved plans were prepared by As cited in Natural Resources Special Condition 2..
2. **Conformance with Plans - Addenda** In addition to plans referenced in the Condition titled "Conformance with Plans," the activities authorized by this permit must be in strict conformance with the following approved plans and/or submissions made as part of the permit application:
 - A. Plans prepared by M.G. McLaren P.C., entitled "Battery Park City Esplanade Pile Remediation Program 2014," Sheets 1-9 of 9, dated 4 March 2014, and received by NYSDEC on 11 March 2014.
3. **Notice of Intent to Commence Work** At least five (5) days prior to the start of work. Permittee must complete and submit the attached "Notice of Intent to Commence Work" form to the NYSDEC Bureau of Marine Resources, 47-40 21st Street, Long Island City, New York 11101 (Attention: Christina Batoh; cdbatoh@gw.dec.state.ny.us).
4. **Posting of NYSDEC Permit Sign** The attached NYSDEC permit sign shall be posted, protected from the weather, in a conspicuous outdoor location at the project site. This sign is to be posted for the duration of work authorized by this permit.
5. **Best Management Practices** Best management practices will be employed to prevent the loss of construction materials, debris, and sediment from entering the waterways. Such practices may include, but are not limited to silt fencing, hay bales, and floating booms.
6. **Minimize Adverse Impacts to Wetlands, Wildlife, Water** All work must be performed in a manner which minimizes adverse impacts to wetlands, wildlife, water quality and natural resources.
7. **No In-Water Work Between November 1st and April 30th** In-water work is prohibited between November 1st and April 30th of any given year.



8. Concrete or Leachate Must Not Escape During construction, concrete or leachate will not escape or be discharged, nor will washings from transit mix trucks, mixers, or other devices enter tidal wetlands and or protected buffer areas.

9. Removal of Debris and Excess Material Any debris or excess material from construction of this project will be completely removed from the adjacent area (upland) and removed to an approved upland area for disposal. No debris is permitted in tidal wetlands or tidal wetlands adjacent area or protected buffer areas.

10. Demolition and Construction Debris Should any demolition or construction debris fall into the waterway or enter the tidal wetlands, it must be removed immediately.

11. Disposal of Demolition and Construction Debris All demolition and construction debris must be properly disposed of at a licensed facility.

12. Prior Approval of Changes If the Permittee desires to make any changes in construction techniques, species to be planted, the site plan, any mitigation plan, scheduling or staging of construction, or any other aspect of this project, the Permittee shall submit a written request to the Regional Permit Administrator to make such proposed changes and shall not make such changes unless authorized in writing by the Department.

13. Failure to Meet Permit Conditions Failure of the permittee to meet all the conditions of this permit is a violation of this permit and grounds for an order to immediately cease the permitted activity at the project site.

14. No Interference With Navigation There shall be no unreasonable interference with navigation by the work herein authorized.

15. Precautions Against Contamination of Waters All necessary precautions shall be taken to preclude contamination of any wetland or waterway by suspended solids, sediments, fuels, solvents, lubricants, epoxy coatings, paints, concrete, leachate or any other environmentally deleterious materials associated with the project.



WATER QUALITY CERTIFICATION SPECIFIC CONDITIONS

1. Water Quality Certification The NYS Department of Environmental Conservation hereby certifies that the subject project will not contravene effluent limitations or other limitations or standards under Sections 301, 302, 303, 306 and 307 of the Clean Water Act of 1977 (PL 95-217) provided that all of the conditions listed herein are met.

GENERAL CONDITIONS - Apply to ALL Authorized Permits:

1. Facility Inspection by The Department The permitted site or facility, including relevant records, is subject to inspection at reasonable hours and intervals by an authorized representative of the Department of Environmental Conservation (the Department) to determine whether the permittee is complying with this permit and the ECL. Such representative may order the work suspended pursuant to ECL 71- 0301 and SAPA 401(3).

The permittee shall provide a person to accompany the Department's representative during an inspection to the permit area when requested by the Department.

A copy of this permit, including all referenced maps, drawings and special conditions, must be available for inspection by the Department at all times at the project site or facility. Failure to produce a copy of the permit upon request by a Department representative is a violation of this permit.

2. Relationship of this Permit to Other Department Orders and Determinations Unless expressly provided for by the Department, issuance of this permit does not modify, supersede or rescind any order or determination previously issued by the Department or any of the terms, conditions or requirements contained in such order or determination.

3. Applications For Permit Renewals, Modifications or Transfers The permittee must submit a separate written application to the Department for permit renewal, modification or transfer of this permit. Such application must include any forms or supplemental information the Department requires. Any renewal, modification or transfer granted by the Department must be in writing. Submission of applications for permit renewal, modification or transfer are to be submitted to:

Regional Permit Administrator
NYSDEC REGION 2 HEADQUARTERS
47-40 21ST ST
LONG ISLAND CITY, NY 11101 -5407

4. Submission of Renewal Application The permittee must submit a renewal application at least 30 days before permit expiration for the following permit authorizations: Excavation & Fill in Navigable Waters, Water Quality Certification, Tidal Wetlands.



5. Permit Modifications, Suspensions and Revocations by the Department The Department reserves the right to exercise all available authority to modify, suspend or revoke this permit. The grounds for modification, suspension or revocation include:

- a. materially false or inaccurate statements in the permit application or supporting papers;
- b. failure by the permittee to comply with any terms or conditions of the permit;
- c. exceeding the scope of the project as described in the permit application;
- d. newly discovered material information or a material change in environmental conditions, relevant technology or applicable law or regulations since the issuance of the existing permit;
- e. noncompliance with previously issued permit conditions, orders of the commissioner, any provisions of the Environmental Conservation Law or regulations of the Department related to the permitted activity.

6. Permit Transfer Permits are transferrable unless specifically prohibited by statute, regulation or another permit condition. Applications for permit transfer should be submitted prior to actual transfer of ownership.



NOTIFICATION OF OTHER PERMITTEE OBLIGATIONS

Item A: Permittee Accepts Legal Responsibility and Agrees to Indemnification

The permittee, excepting state or federal agencies, expressly agrees to indemnify and hold harmless the Department of Environmental Conservation of the State of New York, its representatives, employees, and agents ("DEC") for all claims, suits, actions, and damages, to the extent attributable to the permittee's acts or omissions in connection with the permittee's undertaking of activities in connection with, or operation and maintenance of, the facility or facilities authorized by the permit whether in compliance or not in compliance with the terms and conditions of the permit. This indemnification does not extend to any claims, suits, actions, or damages to the extent attributable to DEC's own negligent or intentional acts or omissions, or to any claims, suits, or actions naming the DEC and arising under Article 78 of the New York Civil Practice Laws and Rules or any citizen suit or civil rights provision under federal or state laws.

Item B: Permittee's Contractors to Comply with Permit

The permittee is responsible for informing its independent contractors, employees, agents and assigns of their responsibility to comply with this permit, including all special conditions while acting as the permittee's agent with respect to the permitted activities, and such persons shall be subject to the same sanctions for violations of the Environmental Conservation Law as those prescribed for the permittee.

Item C: Permittee Responsible for Obtaining Other Required Permits

The permittee is responsible for obtaining any other permits, approvals, lands, easements and rights-of-way that may be required to carry out the activities that are authorized by this permit.

Item D: No Right to Trespass or Interfere with Riparian Rights

This permit does not convey to the permittee any right to trespass upon the lands or interfere with the riparian rights of others in order to perform the permitted work nor does it authorize the impairment of any rights, title, or interest in real or personal property held or vested in a person not a party to the permit.

New York State
Department of Environmental Conservation



The Department of Environmental Conservation (DEC) has issued permit(s) pursuant to the Environmental Conservation Law for work being conducted at this site. For further information regarding the nature and extent of work approved and any Departmental conditions on it, contact the Regional Permit Administrator listed below. Please refer to the permit number shown when contacting the DEC.

Permit Number 2-6299-00027/00024

Expiration Date 12/31/2017

John F. Cryan
Regional Permit Administrator

John F. Cryan
47-40 21st Street
LIC, NY 11101
(718) 482-4997

NOTE: This notice is NOT a permit

NOTICE OF INTENT TO COMMENCE WORK

Date: _____

**NYSDEC Marine Resources
Attn. Marine Resources Supervisor
N.Y.S.D.E.C Region 2 Office
47-40 21st Street
Long Island City, N.Y. 11101**

**Re: NYSDEC Permit No. 2-6299-00027/00024
BATTERY PARK CITY
WEST ST - W SIDE - CHAMBERS ST TO BATTERY PLACE
BETWEEN LIBERTY & VESEY ST AND BETWEEN MURRAY & CHAMBERS
ST, UNDER ESPLANADE, MANHATTAN
NEW YORK, NY 10021**

Dear Marine Resources Supervisor:

In accordance with Natural Resource Condition 3 of the referenced permit, I hereby serve notice to commence work on _____, 20____.

This is also to certify that, having read this entire permit, I am fully aware of and understand the general and natural resource conditions therein, and agree to comply with all such conditions further understand that prior to undertaking any modification to the subject work, I must seek and receive written approval of the NYSDEC Regional Permit Administrator.

Signature of Permittee

Signature of Contractor

Name of Permittee (please print)

Name of Contractor (please print)

Street Address of Contractor

City, State, & Zip Code of Contractor

Telephone Number of Contractor

WARNING

The permittee and his contractor (if any) are required to follow all permit conditions. Violations of the permit may lead to legal action, including the imposition of substantial monetary fines and corrective work.

cc: Environmental Permits